

Arts-based interventions in healthcare education

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ABSTRACT

Healthcare education institutions are increasingly including arts-based interventions in their programmes. We analysed 62 studies of arts-based interventions to understand how these interventions may be beneficial, and why providing evidence continues to be a challenge for the field.

Our analysis highlighted two issues. We found that 79% of the included studies reported that their interventions were successful, but without always defining this success or how it was measured. This lack of clarity was apparent in descriptions of both what arts-based interventions aimed to do, and in descriptions of how they might do this. We also found that only 34% of studies involved a collaboration with artists or arts educators, raising questions over who had the necessary experience and specialism in the arts to design and deliver such interventions.

Our analysis revealed that arts-based interventions are failing to acknowledge, and subsequently capture through assessment, the process of learning in the moment. This is particularly important because arts-based pedagogies typically use embodied, practical, physical methods, in which what is being learnt cannot be separated from the process of learning. Involving artists and arts educators throughout the process of designing and delivering these interventions may help to bring clarity over what arts-based interventions are aiming to do and how they may do this, and ensure that appropriate evaluation methods are used. We suggest that close observation with feedback, and the use of reflective portfolios are two ways of assessing the process of learning in arts-based interventions.

INTRODUCTION

The authors were motivated to undertake this literature review by the growing pressure to provide evidence for the efficacy of arts-based interventions in healthcare education. Despite previous reviews of the field demonstrating a growth in scale and enthusiasm for such interventions, there is an increasing need to understand their place in packed healthcare education programmes, and to articulate a standard for best practice in both delivery and evaluation.^{1–8}

APPROACH

We searched the databases Ovid MEDLINE, Google Scholar, JSTOR as well as the journals *Medical Humanities* (BMJ), *Medical Education* and the *Journal of Medical Humanities*, for arts-based interventions in healthcare education. We used a combination of the following search terms: ('arts methods' or 'arts-based learning' or 'visual arts' or 'drama' or 'physical theatre' or 'narrative medicine'

or 'narrative-based medicine' AND 'medicine' or 'medical education' or 'medical students' or 'healthcare' or 'professional development' or 'CPD' or 'continuing professional development'), which generated 1142 articles. By filtering through abstracts and then reading in full those studies that seemed to fit our inclusion criteria (shown in [figure 1](#)), we came to a final count of 62 included studies (online supplementary file 1). We then catalogued these 62 studies against the following 12 categories:

1. The type of arts-based intervention used in the studies (visual, performing or literary arts)
2. Who the participant group was (by healthcare field)
3. How participants engaged in the intervention (actively, passively or by observing)
4. Specific features of this participation
5. The length of the intervention
6. The type of data collected (qualitative/quantitative/both)
7. At which points in the intervention that the data were collected (pre, post, both, during)
8. Whether the study reported success
9. The conclusions and benefits of interventions
10. The stated aims or hypotheses of the study
11. The compatibility between the evidence and the aims/hypotheses
12. Whether the study involved collaboration with artist/arts organisation or arts educator

We used these categories as a way to better understand which features, if any, had a relationship with the ultimate success of the interventions. New categories emerged organically as we undertook the analysis. Most notably, after we found a high proportion of studies reporting success we added categories numbered 10 and 11 (above) to better understand what this success was based on.

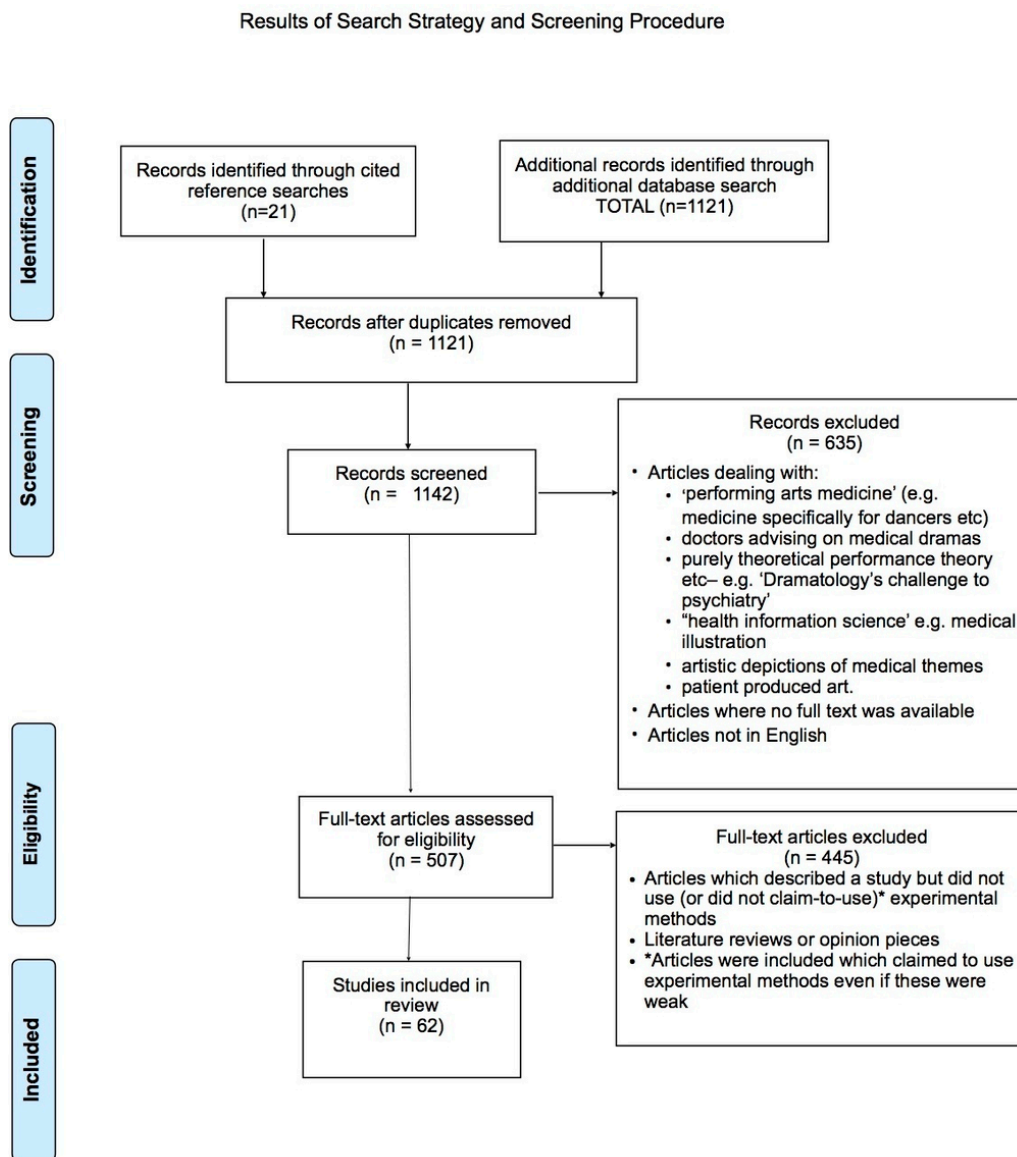
A note on 'arts' and 'humanities'

The boundaries between 'arts' and 'humanities' subjects are poorly defined. Previous reviews have often grouped a broad range of these subjects together. We observed in these previous reviews, however, that interventions which draw on philosophy, history, anthropology, sociology or ethics—which, here we call humanities—tended to employ lectures and seminars as their primary teaching approach. In contrast, interventions drawing on the visual, performing and creative literary arts—which

¹These include the Empathetic Skills Scale, Jefferson Scale for Physician Empathy and Interpersonal Reactivity Index. There are many other studies that measure the impact of different educational interventions on participants' empathy, but they did not fit the criteria for inclusion to this review.



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Figure 1 Results of search strategy and screening procedure.

here we call arts—were more likely to use practical teaching methods involving a range of physical activities. In light of these distinctions, we chose to include only interventions drawing on the visual, performing and literary arts, with the hope that by doing so we could shed light on the pedagogical principles at play within interventions of these kinds.

FINDINGS AND DISCUSSION

The data from our analysis are shown in [figure 2](#) (based on categories 8, 10 and 11), [figure 3](#) (categories 8 and 9), [figure 4](#) (categories 3 and 4) and [table 1](#) (categories 1, 2, 6, 7 and 12). Our analysis highlighted two key issues. The first is a lack of clarity over the criteria for the success of these interventions; the second is the low proportion of studies involving artists in design and delivery. This discussion explores the causes for, and implications of, each of these in turn. In the final section, we make recommendations to address these issues.

Measuring success

[Figure 2](#) shows that 79% of studies reported that the intervention they used was successful, 19% were inconclusive and 2% was not successful. The y-axis shows the proportion of successful, inconclusive and unsuccessful studies, which have evidence to support their aims or hypotheses, which we found by comparing categories 10% and 11. Thirty-seven per cent of all studies reported success and had evidence to support their aims or hypotheses; 3% of all studies reported success but found inconclusive evidence to support their aims or hypotheses and 39% of all studies reported success but had no evidence to support their aims/hypotheses, as the study was explicitly exploratory. Therefore, a total of 42% of all the included 62 studies (which equates to over half (52%) of the successful studies) were deemed successful but with either inconclusive or no evidence to support their aims or hypotheses. Therefore, it is unclear what the evaluation of success is based on, and indicates a lack of clarity about what these interventions

Was there evidence to support the aims/hypotheses?

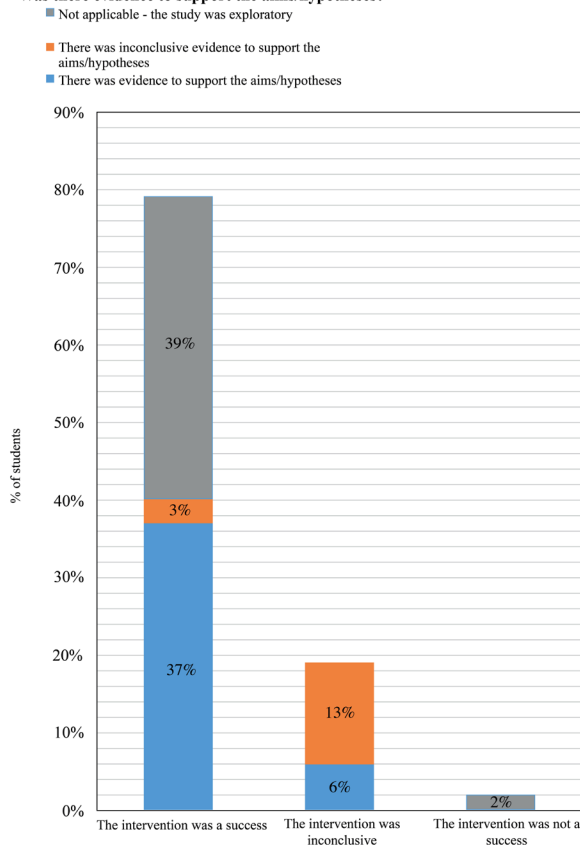


Figure 2 Success and evidence for interventions.

are aiming to do, how they are doing this and how this can be assessed. The reported benefits of successful interventions are shown in [figure 3](#) with the majority pointing to 'development of empathy or compassion' (30%), and 'personal or professional development' (34%). Another reliable indicator for success would be the use of a precourse and postcourse methodological design. However, as shown in [table 1](#), only 29% of studies conducted used this, with 53% using only a postintervention assessment, 5% using only precourse and 13% using neither precourse or postcourse.

In order to have clear criteria for the success of interventions, there is a need for those designing and reporting on them to state clearly the aims for the interventions, hypotheses for how these

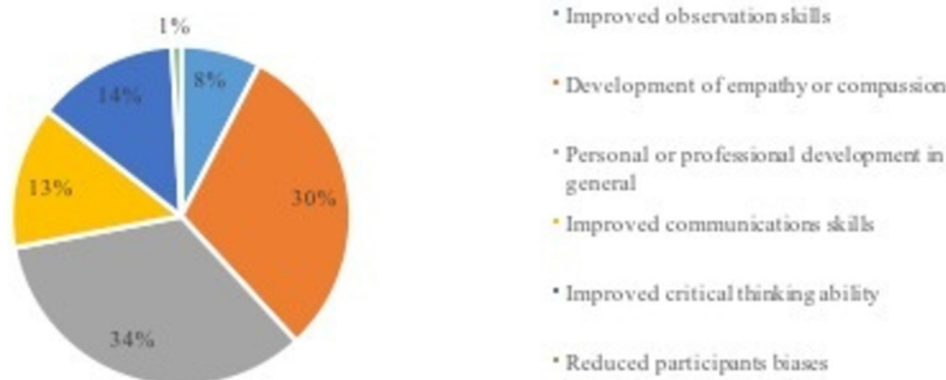


Figure 3 Reported benefits of successful interventions.

aims are met via the process of learning and then use assessment methods that are appropriate to capture these. Within the studies we analysed, few studies acknowledged or described the process of learning in the moment.

Eliot Eisner (2004) is Professor of Art and Education at the Stanford Graduate School of Education, and has argued that within arts-based pedagogies 'how something is said is part and parcel of what is said'.⁹ The benefits of arts-based pedagogies, he argues, are at least as much about how learning is facilitated as about what is being taught, meaning that form and content are tied. Our analysis makes clear that the key pedagogies used in the interventions were, as Eisner suggests, active, embodied, practical learning activities, where what is being learnt is tied up with how it is being learnt. [Figure 4](#) illustrates the ways that participants engaged in the interventions, showing that in 76% of studies participants actively participated, 13% observed a performance or film and 11% involved a mix of active participation and observation. Active participation typically involved practical, physical, embodied learning activities, such as theatre exercises (34%, which includes improvisation and forum theatre); visual arts exercises (30%, including sculpture or life drawing) or group discussion (30%). Only 4% used lectures. However, this pedagogical characteristic of arts-based pedagogies is under-represented in the descriptions of the studies we examined, which typically provide learning objectives which focus on 'what' is learnt, and are separated from the process of learning. It may be that, as those designing these interventions typically have no arts background or expertise, they lack the language or theoretical knowledge to describe these processes.

This characteristic of arts-based interventions has implications for the assessment methods used to measure their efficacy. A study by Haji *et al*¹⁰ rethinks programme evaluation in healthcare education, and suggests that the field should move beyond asking the question 'did it work?'.¹⁰ They argue that the outcome-based models which still dominate healthcare education are inadequate in addressing the complexities of the healthcare education context. They suggest that evaluations should aim to demonstrate programme's worth and to generate information which can inform the work of others. They argue that the large number of studies reporting that an intervention made 'no significant difference' may be because the questions being asked are inadequate, explaining:

Our ability to make such judgments (to demonstrate merit or worth) rests principally on the evaluation of the effectiveness of our programmes, in which what we define as "effective" is inescapably linked to the outcomes of our educational

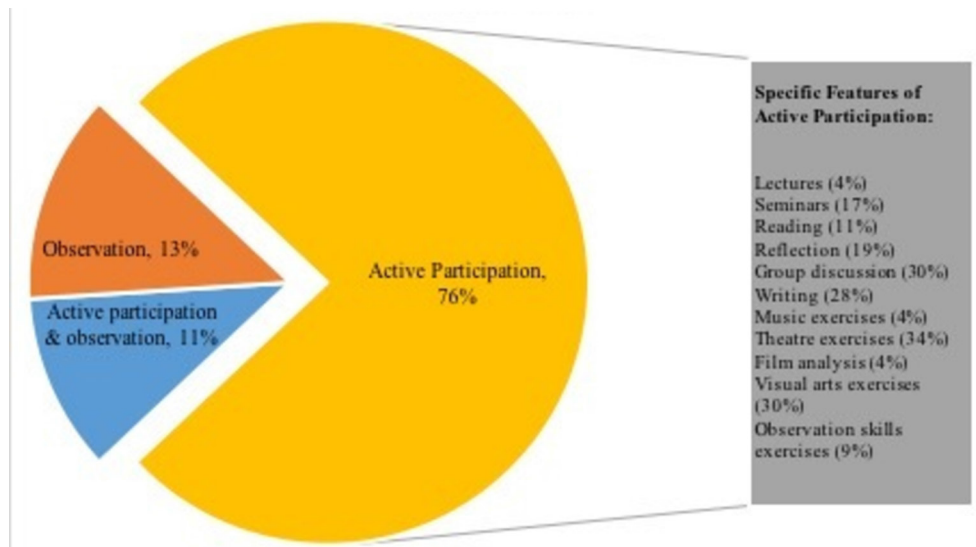


Figure 4 Results of search strategy and screening procedure.

interventions... [A] lack of considerations of what is actually happening in the moment (as opposed to what we predict will happen based on our goals) limits our capacity to account for complexity.¹⁰

Therefore, in order for the fields to be able to benefit from the new tools for healthcare education which arts-based approaches may provide, it is essential that those designing evaluations take into account the uniqueness of the processes in the moment. This is particularly relevant in arts-based interventions where the learning is so often embodied, practical and active, which means that they are less easily captured by learning objectives which do not emphasise process.

Involving artists

We found that only 34% of studies involved any collaboration with artists, arts organisation or arts educators, as shown in table 1. This seems a low proportion given that each intervention explicitly uses arts approaches, and raises questions over who in the team designing or delivering such intervention has the relevant arts expertise to ensure the quality of the intervention.

The field of arts in healthcare education is often driven by enthusiasts and advocates, typically clinicians, researchers and clinical educators with a personal passion for the arts. While this advocacy has been crucial to the growing success of arts in healthcare education, it is not clear that such individuals have the necessary experience or expertise to ensure that the work is rigorous from an arts perspective.

This issue is connected to, and perhaps perpetuates, a dichotomy which the field of arts in healthcare has wrestled with for many years: between whether the arts have ‘instrumental’ or ‘intrinsic’ value to healthcare. Charlotte Blease has advanced this debate by arguing that ‘intrinsic value’ motivations—which are justifications that emphasise not the usefulness of an intervention but its basic value to the healthcare professional—are somehow seen as the ‘nobler justification’.¹¹ This is contrasted with instrumental goals such as improving verbal communication skills. Blease argues that this distinction is defunct, because when intrinsic value arguments are broken down into constituent components they too become instrumental. The tendency for arts-based interventions to be designed and delivered by enthusiasts rather than in collaboration with experts from the arts, may be contributing to a tendency to romanticise the arts, as if they are by their very nature ‘ennobling’ or ‘humanising’. In addition, it may perpetuate a misplaced belief that the arts are too subjective to be assessable, or that by assessing them they will somehow be reduced or ruined.

This tendency was reflected in the literature that we surveyed which nested instrumental goals under an overall framing in ‘intrinsic value’ terms. For instance, the highest reported benefit of interventions within the studies analysed was ‘personal or professional development’ in general (34%), as well as ‘development of empathy or compassion’ (30%) (figure 3). While there are many validated ways of measuring and defining empathy, compassion and professionalism,^{12 13} only three of the included

Table 1 Summary of data analysis

Category	Percentage of studies					
	Literary	Visual arts	Performing arts	Mixed arts		
1. The type of arts-based intervention used in the studies (visual, performing or literary arts)	16%	19%	42%	23%		
2. Who the participant group was (by healthcare field)	Doctors 8%	Medical students 53%	Nurses 2%	Nursing students 15%	Other 12%	Mixed 10%
6. The type of data collected (qualitative/quantitative/both)	Qualitative 37%	Quantitative 26%	Qualitative and quantitative 24%	N/A 13%		
7. At which points in the intervention that the data were collected (pre, post, both, during)	Pre 5%	Post 53%	Pre & Post 29%	Neither 13%		
12. Whether the study involved collaboration with artist/arts organisation or arts educator	Yes 34%	No 66%				

studies used any of these validated measures.* Without these, the reported benefits of development of empathy or compassion become intangible and ring of the ‘intrinsic value’ arguments that Blease speaks of.

We suggest that collaborating with artists and arts educators, and moreover, working with artists from the start of the design of interventions is vital to bring clarity to what the interventions can do. Drawing on their experience, artists and arts-based educators may be able to identify specific behaviours or skills that arts-based interventions can offer to healthcare education. These may be skills such as non-verbal communication or self-care, which can be rehearsed or practised. It may be that it is these skills that the studies we examined were alluding to, but without the language or theoretical knowledge to describe them specifically. Artists may also help to identify what arts intervention should aim to do, rather than simply responding to what is already observed by healthcare educators/clinicians as necessary to teach. This is because ‘outsiders’—in this case artists—may see things that ‘insiders’ do not, as knowledge is inevitably shaped by disciplinary experience. A more innovate approach, therefore, could be to work with artists and arts educators from the start of a design process, to help define which types of knowledge are desirable for healthcare professionals to develop in the first place. Involving artists may also bring further understandings of the mechanisms and principles underpinning arts-based pedagogies, in particular an acknowledgement that what is learnt is tied to the embodied processes of learning. Alongside this, they can also suggest methods of evaluation and assessment from the arts which take into account these characteristics; and may have the expertise and experience to undertake assessment through close observation and individualised feedback.

The benefits of bringing ‘outsiders’ in is illustrated by a study by Watling *et al.*,¹⁴ which compared the ‘learning cultures’ of medicine and music, and found that this idea of close observation with feedback is challenging to the ‘signature pedagogies’ of medicine, which are the characteristic forms of learning within professions.¹⁴ Watling *et al.* describe the learning culture of music as characterised as ‘learning by lesson’, in which the relationship between student and teacher is vital, with music students dismissing the idea that they could learn without feedback from their teachers.¹⁴ Conversely, the authors of the study found that medical students dismissed the value of feedback from teachers, because a ‘culture of limited observation... compromises the credibility of the feedback offered to learners’.¹⁴

In contrast, to music, the signature pedagogy of medicine is described by Watling *et al.*

as ‘learning by doing’, where values of independence and autonomy are important. However, signature pedagogies also help to define what counts as knowledge, and highlight certain learning outcomes as important but also fail to support others. This is where learning from other pedagogical approaches—such as from the arts—can be useful. It may be that within healthcare education, the failure to acknowledge the embodied processes of learning reinforces an idea that the embodied aspects of practice are less important.

RECOMMENDATIONS

Based on our analysis, we hypothesise that it is important that artists be involved throughout the process of arts-based interventions in order to ensure that pedagogies, and evaluation methods are appropriate to the intervention. If people who are unqualified to design and deliver these interventions continue to do so, the quality of work in the field is undermined. Within this study,

there was not scope to investigate in details the nature of artist involvement in the interventions described, although neither was this detail provided in the majority of the studies. Where artists and arts educators are involved, it would be helpful for future studies to state at which point in the development and delivery of the intervention this collaboration began. This may help us to understand the impact that artist involvement can bring.

We argue appropriate evaluation methods can only be applied when those designing interventions are clear about their aims and ideas about how the intervention will meet these aims. The evaluation methods used in the studies did not match the realities of what the interventions were doing, by failing to account for the process of learning in the moment. We suggest that close observation of participants, with personalised feedback is one way of assessing change that does capture the process of learning in the moment. Reflective portfolios are another useful assessment method, involving participants journaling for self-assessment, which can then be analysed by tutors.¹⁵ Having artists teach students how to use these methods effectively is important, because ‘reflection’ within the outcomes-based framework of healthcare education can otherwise become a tick box exercise that undermines its importance as a learning tool.

Bold, multidisciplinary research is required in order to develop the required evidence based for this field. This must acknowledge the unique features of arts-based methods and reflect these in the assessment methods used, and make the case for true collaboration with artists and arts educators.

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Competing interests SW is Director of the Performing Medicine programme which delivers arts-based interventions at various medical schools and NHS Trusts across the UK. Other authors have no competing interest to declare.

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