

The impact of participation in performing arts on adolescent health and behaviour: a systematic review of the literature

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Abstract

This paper reports on a systematic review of literature published between 1994 and 2004 on the effects of performing arts for health in young people between 11 and 18 years of age. The review includes research on music, performance, drama and dance in community settings as well as non-curricular activity in mainstream education. Clinical populations and settings were excluded. A total of 17 electronic databases were searched and 3670 papers identified, 104 of which met our relevance criteria. Full text scrutiny of 85 papers was undertaken and 14 of these were identified for the review, nine reporting quantitative research and six reporting qualitative research (with one mixed methods paper included in both categories). The research was heterogeneous, making overall synthesis of results inappropriate. The review demonstrates that research on the impact of the performing arts on young people outside of clinical settings is at a relatively early stage. Priorities for future research are identified.

Key words

Systematic review; performing arts; participation; health; young people

Introduction

This paper reports on a systematic review of literature published between 1994 and 2004 on the effects of performing arts for health in young people in non-clinical settings. There is increasing interest in the role of arts in health, a broad field that encompasses arts therapies, music and performing arts as well as visual arts, poetry and creative writing. As well as delivering clinical benefits, arts interventions are seen as capable of addressing key concerns of public health such as coronary heart disease, obesity and sexual health (ACE 2004). A recent review by the UK Department of Health suggests that arts and health should be firmly recognised as integral to healthcare provision and healthcare environments (DH 2007).

Arts for health is a potentially vast topic: the field of performing arts was chosen for this review as it offers a discrete definable area with implications for key public health issues affecting young people i.e. obesity, sexual health and mental health. The focus on young people in non-clinical settings reflects increasing investment and support for arts programmes for this group (ACE 2003a & b; Lloyd & Lyth 2003). Identified benefits of participation by young people in arts activity include resisting drugs (Drugs Strategy Directorate, 2002; Starkey & Orme, 2001), managing stress and difficult emotions (Positive Futures, 2005); learning about sexual health (Denman et al. 1995); understanding appropriate physical contact (Salmon and Orme, 2002); excitement, ~~fulfilment~~fulfillment and fun (Harland et al. 2000; Colley & Comber 2003; Frances 2000; Miller & Budd 1999); and addressing social exclusion through community integration (Wilkin et al. 2003; Jackson, 2002).

While there is a wealth of good practice and a growing evidence of the impact of participation in arts for health, this evidence is unevenly spread (Staricoff 2004; Angus 2002; White and Angus 2003). Many programmes that seek health promotion outcomes through involvement of young people in the performing arts have not been subject to robust evaluation (Orme and Salmon 2002; Allott et al. 1999). White and Angus (2003) suggest that evaluation is not yet culturally central to arts for health practice. There is evidence that some of those implementing arts for health programmes resist crudely causal accounts of the relationship between creative action and health outcomes (Health Development Agency 2000). Yet experimental and quasi-experimental designs using psychosocial constructs that reflect broad definitions of health may offer a useful model for evaluation of discrete health outcomes (Murphy & Bennett 2003).

Further, the development of evaluation research in this field has been limited to some degree by the absence of appropriate evaluation tools for this work, which is often driven not by clinical goals but by social and holistic models of health (Angus 2002). According to White & Angus (2003), the majority of evaluations are unstructured, reflecting a lack of clarity about the aims of arts for health initiatives. Many evaluations fail to draw on appropriate, sensitive measurement tools and the small size and limited scope of many projects presents further difficulty for research.

Systematic review rationale

Systematic reviews are increasingly recognised as valuable forms of research that can produce high quality evidence to inform policy and practice (Mays et al. 2005). Initially developed in health services research for the synthesis of quantitative studies (Centre for Reviews and Dissemination, 2001), systematic review methodologies are increasingly being developed in the social sciences and for qualitative research (Wallace et al. 2004; Weed 2005). Most recently, there has been strong interest and methodological development of approaches to integrating systematic reviews of qualitative and quantitative research (Dixon-Woods et al. 2005; Mays et al. 2005). This paper is intended as a contribution to this emerging but potentially rich coming together of methods and disciplinary approaches.

Along with concerns that inappropriate forms of evaluation may negatively affect the intervention (White and Angus, 2003), it could be argued that the systematic review method may force creative arts projects into an inappropriate positivist evaluation model and/or ignore the situation specific nature of arts interventions. These issues mirror wider concerns by those who resist growth of 'criteriology' more generally (Schwandt, 1996). However, we suggest that the application of the systematic review method can include qualitative research and need not ignore the situation specific context of arts interventions if these are well described and their importance argued in research reports. Most crucially, the systematic review method allows the reader to track the research process in order to establish whether the review team's decisions are justified in terms of the evidence and the criteria applied.

While we recognise that research and evaluation in arts and health is an emerging field, open to diverse methodologies, this paper offers an illustration of the contribution of systematic review methods to building the evidence base for arts and health.

Methods

The search strategy:

The search was undertaken in July 2004 using the 17 databases identified in Table 1. These data bases were identified as those containing the most relevant literature as well as being accessed most frequently by professionals and academics working within the fields of arts, health and young people. We restricted the search to papers published over the previous 10 years.

Financial limitations meant it was not possible to pay for translation services and therefore databases were limited to those in the English language. We also identified information produced by key agencies identified through web searching of general research terms including young people, performing arts and research. Key papers were identified and all relevant references from those articles were followed up until saturation had been reached.

<Table 1 here>

Inclusion criteria

Our search terms (Table 2) reflected our inclusion criteria, which encompassed population characteristics, type of intervention, research and evaluation methods. Hence we included papers on performing arts

interventions with children and young people including school pupils between the ages of 11 to 18 within mainstream education and community settings published between 1994 and 2004. Research on clinical and 'special' populations and settings such as hospitals, special schools and prisons was excluded. Intervention studies of performing arts outside of the standard curriculum were included in three areas: drama, dance and music. Activities in these areas that took place as part of the regular curriculum were excluded along with other art forms such as visual arts and martial arts.

<Table 2 here>

Where there was any doubt about whether a paper met the inclusion criteria two reviewers screened the full text papers. A summary of the inclusion and exclusion criteria is provided in Table 3.

<Table 3 here>

Results

The search was undertaken in two phases. The phase one database search resulted in 3670 initial hits (see Figure 1). The titles and abstracts of these were screened for relevance and duplicates removed: this process reduced the number of papers to 202. The abstracts of these were downloaded into a Procite database and after further screening of these, 104 papers were identified that seemed to meet our relevance criteria.

<Figure 1 here>

Phase two involved full text scrutiny of papers. Attempts were made to contact authors of any papers not available electronically or from library sources, but this still resulted in 19 papers being unobtainable, ten of which were from NHS and local government organisations from the mid 1980s onwards.

A total of 85 full text papers were scrutinised, including 30 reports of quantitative studies and 55 reports of qualitative and mixed methods research. As well as relevance, threshold methodological inclusion criteria were applied at phase two. In relation to quantitative research, we included all papers that reported results of pre- and post-testing following a performing arts intervention, regardless of whether these included the use of controls or randomisation procedures. In relation to qualitative research, we included all papers that reported the use of recognised procedures of data collection such as interviews, focus groups and observation.

Among the qualitative reports were a large number of case vignettes and reports by practitioners describing a wide range of benefits of a range of performing arts interventions including music training, music performance and creative drama. However, the lack of reporting of procedures for data collection and analysis meant that it was difficult to include these reports. This left a total of six qualitative studies along with nine quantitative studies included in the review. One paper (Walsh-Bowers & Basso, 1999) described a mixed methods study with a quantitative and qualitative element, both of which were included, hence 14 papers were included in the review. The

studies were subjected to critical appraisal using standard tools in a process whereby each paper was reviewed by two researchers.

Methodological characteristics of the studies

~~The review included nine quantitative studies and six qualitative studies.~~ Of the nine quantitative studies, a total of six controlled studies were identified, three of which (Elliott et al 1996; McArdle et al. 2002; Harvey et al. 2000) met critical appraisal criteria for randomised controlled trials (RCTs) as set out in 2006 CASP (Critical Appraisal Skills Programme) guidelines.

These three studies used procedures of randomisation to allocate individuals to intervention or control groups. The remaining three studies used pre and post test questionnaires to assess interventions but did not make use of control or comparison groups in the research design. We have included all nine in the discussion in order to highlight methodological issues and innovative approaches that characterise research in this challenging field. Six qualitative studies were also included in the review: all of these used recognised procedures for data collection. Three of the studies (Bradley et al. 2004; Lasic & Kenny 2002; Walsh-Bowers & Basso 1999) would have met the criteria for critical appraisal of qualitative research as set out by CASP (2006) including rigour, credibility and relevance. We have included all six in order to highlight some of the methodological issues that currently face researchers in this field.

The study findings

All of the studies we included focused on drama interventions. Hence a key finding from our research is that there is relatively little reporting of evaluated non-drama interventions within non-clinical settings. While all the studies focused on drama, they were heterogeneous, using different research designs and drawing on different ontological and epistemological premises.

The heterogeneity of the studies means that it is not appropriate to synthesise the findings. For example, the interventions being evaluated ranged from one-off performances through to weekly drama sessions over an extended period of more than a month. Drama was provided with and without discussion workshops. In some interventions the target population were performers and in others they were the audience. The studies also encompassed diverse populations. Some focused on selected groups of young people including those defined as 'at risk' by parents, teachers and professionals, young people in deprived areas and young people from minority ethnic groups. Others focused more generally on young people in schools or community settings. This diversity also makes it difficult to compare results and generalise the findings. Nevertheless, a number of key findings did emerge from the study, and these are addressed in terms of four key areas: peer interaction, social skills and empowerment; knowledge, attitude and risk in relation to HIV/AIDS; sexual health; and alcohol, tobacco and illegal drug use. A thematic summary of the study findings is presented in Table 5.

<Table 5 here>

Peer interaction, social skills and empowerment

Seven studies focused on general health, educational and social benefits of arts interventions with young people. McArdle et al. (2002) carried out a ~~randomised control trial~~ RCT of 122 'at risk' children aged 11 in a deprived area of the UK. The intervention was a one-hour group drama session lasting 12 weeks and the control group worked on national curriculum maths and English. Initially there was random allocation with some attempt at blinding, however, there was subsequently some exchange between groups following consultation with teachers in order to ensure an appropriate case mix for the groups. Seventeen of the original participants were not included in the follow up. The group therapy and the curriculum studies interventions ran in parallel, eight children in each group, repeated in three consecutive terms in two schools.

Measurements encompassed the three domains of behaviour, symptoms and self-concept. Established measurements were used including the Teacher Report Form (TRF), the Youth Self Report tool (YSR), the Multidimensional Self Concept Scale (MSCS) and the parent completed Child Behaviour Checklist (CBCL). A series of analyses were reported including use of an Intercooled STATA 6.0 for windows random effects regression model technique that allowed for both within and between subject effects to be considered as well as changes over time.

The study found significant decline in self reported symptoms and significant improvements in self concept as well as teacher assessed behaviour among the intervention drama group compared with the curriculum

studies group. The study also found evidence of short-term improvements in behaviour assessed by parents, although these improvements were not sustained at follow up (McArdle et al. 2002). The authors concluded that group therapy interventions are superior to no interventions and that compared with curriculum studies, group therapy appears to accelerate change.

The impact of drama interventions on social skills and interaction was explored in a mixed methods study by Walsh-Bowers & Basso (1999). This study focused on two drama interventions with seventh grade children in a rural elementary school in Ontario, Canada. The first of these involved 24 students in a class of 33 who with their parents agreed to take part in a 15 week drama intervention. This group was compared with a class in a smaller school in the region which did not receive the drama programme. The usefulness of this comparison was, however, questioned by the authors, who identified important differences between the two environments. Hence the comparison class was described as a particularly supportive climate for peer relations compared to the problematic intervention class that was embedded in a more traditional school climate. A range of validated measurement tools were used in a pre- and post-test design focusing on domains of peer interaction and social skills. The quantitative data yielded ambiguous results. However, significant improvements in parent rating of social skills were reported in the intervention group over the comparison group.

A second intervention by the same researchers took place in an urban school and involved 29 students (Walsh-Bowers and Basso, 1999). This used the same drama intervention and similar outcome measures to those used in

the first study. The intervention group was compared with three similar classes that did not receive the intervention. The results showed no differences in self-report peer interaction measures although teacher ratings showed significant improvements in the intervention group. Overall, lack of randomisation and blinding, small sample size and the problematic use of a comparison group in the first study limit the quantitative findings of this research.

Issues of risk and empowerment were also addressed in six of the qualitative studies. The paper by Mattingly (2001) is a reflexive account of a qualitative study of a community theatre project with 'at risk' teenagers in California, USA. A number of issues arose from the project including the question of representation, which was seen as key to the understanding of the ways in which arts might benefit marginalised teenagers. By empowering this group into forms of self and community representations, the author concluded that community arts can challenge marginalisation and stereotyping (Mattingly, 2001).

Bradley et al. (2004) undertook a qualitative study of the 'Voices' project, a capacity building exercise in community development for youth at risk. The study used a methodology of participatory action research, describing in detail the action cycles used in this the research. A number of interventions were undertaken including the formation of a theatre group for ten young people. Interviews with the young people were undertaken at pre-, mid and post-theatre experience. A range of data sources were used including transcripts of meetings, Council minutes, observation, theatrical

exercises and interview data. Data were analysed using thematic identification of similarities and differences that emerged.

The authors found that the project brought together a disparate set of marginalised youth, forging them into a cohesive group who then seemed to tackle their various problems in a unified way. Involvement by young people in the intervention was seen to generate immediate benefits both for the young people and their community.

Douglas et al (2000) undertook a qualitative process evaluation to examine the effectiveness, and assist in the development of 'Vital Youth', a TIE project addressing health and performance related topics with participants. This project involved 17 three-hour workshops and rehearsals culminating in performances at a local theatre. Nineteen African and African-Caribbean young people aged 13-19 took part in the evaluation. The data were analysed using a thematic grounded theory approach. ~~A number of themes~~ Themes were identified including the development of social skills, performing arts skills and increased knowledge of relevant health topics. Participants reported opportunities to learn about and discuss relevant health-related topics, as well as develop enhanced social skills and confidence. An innovative three-hour participatory evaluation workshop considered some methodological evaluation issues arising from the project. The authors concluded that by actively involving young people, addressing their concerns and using activities that engage them in productive group work processes, drama interventions can be usefully applied whatever the resources available.

While this finding is not further developed theoretically, the study does demonstrate the useful application of an innovative evaluation methodology.

Some issues of risk and negative effects of drama were identified by Walsh-Bowers & Basso (1999) who included qualitative observation and interviews with ten students as part of the mixed methods study described above. The data focused on responses to the drama intervention as well as issues of group dynamics and cooperation with others. Groups taking part in the first intervention were initially reluctant to engage with the process, and by the end of the intervention at least one group refused to do drama. Nine out of the ten interviewees are reported as giving unenthusiastic responses to questions about how they felt about participating in the drama groups but all the interviewees identified ways in which the groups facilitated cooperation. Hence the findings indicate that students' peer relations skills can to some extent be improved by participation in drama.

Process issues also arose from the evaluation, including the need for school staff to own the programme. The authors concluded that mainstream education is characterised by a cognitive bias that renders staff ill equipped to deal with the dynamics inherent in classroom group work, especially creative drama. Hence the presence of motivated group leaders who are skilled in both group work and creative activity and familiar with school settings may be a prerequisite for this type of intervention to succeed. While this is an insightful account, little information is given about the framework for analysis of the interview data making it difficult to interpret the findings.

A study by Jackson (2003) of 20 white and Scottish born young people aged 10 -16 was conducted in a community school in a disadvantaged area of

Scotland. The project was a series of drama workshops involving group discussion, role-play and improvisation which sought to enable young people to express their views about health services as well as encouraging professionals to listen to young people and to stimulate action to address the issues. The drama was performed before an invited audience of 30 health and education professionals followed by questions. The drama was enthusiastically received and engendered practical outcomes relating to young people's usage and experience of health services.

The methodology was one of action research seeking to develop methodologies of engagement of young people in service development. Interviews with participants sought to evaluate the impact of the drama project on participants. Peer interviews were also used. The authors concluded that drama has a number of uses including enhancing self-expression and exploring health issues. When used in conjunction with conventional techniques such as focus groups, drama may be useful in communicating the needs of client groups to service providers and planners as well as and generating outcomes in the form of service improvements.

As with many of the qualitative studies, this report has a number of gaps including a lack of detail about the framework and procedures used for data analysis, again making it difficult to interpret the findings. Use of a number of measurable indices was reported although no further information about these was provided, and it is not clear how these contribute to the qualitative analysis.

Lasic and Kenny (2002) undertook a study of 'at risk' young people drawn from three secondary schools in a disadvantaged area of Melbourne,

Australia. Nineteen young people took part in eleven drama performances that were viewed by a total of 550 students. The aim of the drama project was to build resilience as part of a health promotion programme. The evaluation used a mixed methods approach and the qualitative data were generated from interviews with teachers and student performers, a focus group with five young people drawn from the latter group and informal interviews with parents after the performance.

Teachers reported academic and social benefits as well as improved student-teacher relationships. The authors concluded that there are positive effects of drama relating to personal benefits although drama may be less effective in raising awareness of relevant community support services. However, as relatively little information about methodological issues such as selection of participants and methods of data analysis is given it is difficult to draw any wider interpretation from the findings.

Knowledge, attitudes and risk behaviour in relation to HIV/AIDS

Three studies focused on the impact of drama on knowledge, attitudes and risk behaviour in relation to HIV/AIDS, reporting mixed results. The most extensive study was that by Harvey et al. (2000), a randomised community intervention trial involving two over a thousand pupils in seven pairs of secondary schools in South Africa. This investigated the impact of drama on changes in knowledge, attitudes and behaviours concerning HIV/AIDS. Ten pairs of schools were selected and randomised to receive the programme (DramAide intervention) or information booklets (booklet intervention). Three

pairs of schools were excluded from the study due to problems of access and administration.

A pre-intervention survey was conducted in all the schools followed by a post-intervention survey on the same students 6 months after completion of the programme. Out of 1080 who took part in the pre-intervention survey, 699 (64.7%) were present during the post-intervention round. A structured self completion questionnaire focused primarily on attitude determinants for behaviour change including knowledge about HIV/AIDS, attitudes to risk, attitudes towards people with AIDS and preventive behaviour. The data analysis focused mainly on attitudes and knowledge and excluded self reported behaviour change. It used a grading of three 'correctness' scores and the change in mean scores from pre-to post intervention surveys was measured to assess the influence of the intervention.

The reported results include significant increases in knowledge about HIV/AIDS in the both DramAide and booklet intervention schools with a greater increase that was statistically significant in the former group. In relation to attitudes about HIV/AIDS, mean scores increased in the DramAide intervention schools but showed no evidence of change in the booklet intervention schools. Analysis of self reported behaviour showed some changes, including increased reported condom use, in students in the DramAide intervention schools although these changes were not statistically significant. The authors concluded that drama intervention can lead to significant improvements in knowledge and particularly attitudes to HIV/AIDS. They also identified limitations of the study, but the high response rate (over

90%), the consistency of results and the randomised design all contribute to the validity of the findings.

A controlled study by Denman et al. (1995) examined the effects of a drama programme focusing on HIV/AIDS in 12 UK secondary schools which involved an intervention group (n=252) who took part in a TIE Programme entitled 'Someone Like You' and a control group (n=428). Following the intervention, the experimental group showed significantly bigger gains in knowledge than the control group and also showed significantly greater shifts in attitude. Hence the authors concluded that the drama programme led to improvements in knowledge levels and influenced the attitudes of the children participating in the initiative.

Research by Elliott et al. (1996) explored the impact of theatre on HIV/AIDS education on knowledge, attitudes and risk behaviour among young people in ten youth projects in socially deprived areas of Glasgow. The research compared a theatre production on HIV with a standard group based health education seminar. Standardised self-completion questionnaires completed prior to the intervention and two months afterwards. A total of 132 young people attended a theatre performance and 85 attended the seminars. Complete pre and post intervention data was collected from only 42 of the theatre attendance group; and 35 of the young people attending the standard seminars, a limitation acknowledged by the authors. Little change in knowledge and attitudes following the intervention was found, although there was some evidence of attitudinal change among those exposed to the group seminar. There were also changes in reported behaviour with more of the

theatre intervention group reporting buying and carrying condoms, although this did not extend to levels of reported unprotected sex.

Sexual health

Two studies focused on sexual health issues. Lloyd (1999) examined the impact of a drama production and workshops delivered by a theatre company to 280 pupils in a UK comprehensive school using a pre and post intervention questionnaire. Reported benefits included improved sexual knowledge and changes in attitudes concerning availability of and access to contraception. Limitations of the study included the lack of comparison group and the identification of which element of the programme led to specific changes.

Kerr and MacDonald (1995) examined the effects of an interactive drama performance by student nurses on 48 secondary school pupils in a large UK comprehensive school. Pre and post intervention questionnaires were administered with a response rate of 81% reported for the post intervention questionnaire. There was also a focus group held six months after the initiative. Wide-ranging benefits of the intervention were reported, although further interpretation of the quantitative data is limited because of the lack of detailed reporting of the data collection and analysis procedures used.

Alcohol, tobacco and illegal drug use.

Two studies examined the effects of arts interventions on young peoples' reported alcohol, tobacco and illegal drug use. In a study of a combined arts programme in a US secondary school, 292 students who volunteered to take part in the programme were compared with those in a comparison school

where the intervention did not take place (Nelson & Arthur 2003). The study examined pre- and post-intervention responses on drug and alcohol use, reporting increased resistance to drug use among those participating in the programme. However, as the arts were embedded in a complex multifaceted intervention it is difficult to attribute these outcomes to any specific arts component. The use of a self-selected, non-random sample presents a further difficulty in interpreting these results.

One mixed methods study examined the effects of an interactive drama production and day workshop on 10 -11 year olds in 41 schools in England (Starkey & Orme 2001). Data were collected using a recognised 'draw and write' tool and statistical analysis of pre and post-test results concerning knowledge, attitudes and decision making skills was carried out. Significant improvements in children's knowledge about drugs were reported, although the authors note the limitations of the lack of a comparison group and the use of a self-selecting sample.

Discussion and conclusions

Our review found evidence of positive outcomes following performing arts interventions and provides insight into some of the impact and process issues associated with arts for health initiatives. The strongest evidence is in relation to the impact of drama on peer interaction and social skills, where we found the largest number of studies. Outcomes of drama interventions included positive changes in reported behaviour among at-risk young people (McArdle et al. 2002) as well as improvements in social skills and interaction as rated by teachers and parents, although some results were also ambiguous in

respect of the impact of performing arts on behaviour (Walsh-Bowers & Basso 1999).

These quantitative findings were reinforced in qualitative research. Hence the qualitative studies identified a number of impacts of performing arts for health initiatives such as development of self-confidence and social skills (Douglas 2000; Lasic & Kenny 2002), as well as enhanced peer interaction and co-operation (Walsh-Bowers & Basso 1999).

In relation to other areas HIV/AIDS knowledge, awareness and risk the review found evidence of changes in reported behaviour such as condom use (Harvey et al. 2000; Elliott et al. 1996). Mixed evidence was found in relation to knowledge and awareness, with positive outcomes of arts interventions reported by Harvey et al. 2000 and Denman et al. 1995) and no significant changes reported by Elliott et al. (1996).

In terms of broader sexual health there were reports of improved sexual knowledge and changes in attitudes concerning availability and access to contraception following performing arts interventions (Lloyd 1999; Kerr & Macdonald). There were, however, no randomised studies in the general area of sexual health.

In relation to alcohol, tobacco and illegal drug use, the identified studies reported that drama interventions led to increased resistance to drug use (Nelson and Arthur 2003) and significant improvements in children's knowledge about drugs (Starkey and Orme 2001).

We identified qualitative research studies that provide useful information about factors affecting the impact of performing arts interventions as well as processes that can underline the success or failure of projects.

These include the potential influence of stakeholders including teachers, staff and group leaders, discussed by Walsh-Bowers & Basso (1999). Another key issue is the importance of securing involvement and participation by young people in research processes (Bradley et al. 2004). The qualitative studies indicate some potentially negative or challenging aspects of performing arts interventions. For example, the research by Walsh-Bowers & Basso (1999) suggests that it may be difficult for some young people to engage with drama interventions. There are some common themes reported in the qualitative research and an indication of potentially useful areas of conceptual development, including the links between representation (Mattingly 2001) and issues of ownership, empowerment and participation (Bradley et al. 2004).

This review explores the evidence for the impact of performing arts on the health and well-being of young people. While we found some rigorous and innovative studies, the review also demonstrates some of the challenges involved in researching complex interventions such as performing arts. These relate to issues of study design including sampling, the use of control groups and randomisation in quantitative research and of the adoption of appropriate frameworks as well as reporting of procedures of data collection and analysis in qualitative research. Only three of the quantitative studies used random allocation to intervention and control groups (McArdle et al., 2002; Harvey et al., 2000; Elliott et al., 1996). The difficulties of randomising young people to group interventions are discussed by McArdle et al. (2002). Problems arising from lack of randomisation included inappropriate comparisons and bias introduced through self-selected samples.

Many of the quantitative studies reported small samples and with some exceptions (e.g. McArdle et al. 2002) issues of sample size and power considerations were not generally addressed. An additional problem is that of attrition: high levels of attrition were reported in some studies, possibly linked with problems of access and administrative difficulties. Further challenges relate to data analysis and interpretation of results. While validated outcome measures were used in a number of studies, we noted a tendency in some to conflate elements. For example, self-reported behaviour change was sometimes conflated with actual changes in behaviour. Finally, closer attention needs to be given to identifying which element of a given programme leads to specific changes.

The review demonstrates that there is a need for both quantitative and qualitative research on the health impact of performing arts interventions. Qualitative methods may sometimes be better suited than quantitative methods to address impact and process issues in relation to performing arts for health. However, we noted a focus in some reports on 'outcomes' and the use of language and frameworks more appropriate for quantitative research. Hence a key challenge for qualitative research is that of identifying appropriate models and frameworks for analysis.

The review also demonstrates that a range of qualitative methods can be used to good effect in research on performing arts and young people. Action research, grounded theory and ethnography were all successfully used in the studies. There is unlikely to be a single qualitative methodology that serves as the equivalent of the RCT as the 'gold standard' in quantitative research.

In many of the papers reporting qualitative studies, relatively little detail was provided about research procedures. For example, little was reported about selection of participants or processes of data collection and analysis. Some studies included reflexive discussion of ethical issues and the relationships between researcher and participants, but most did not. Many studies (including a large number we rejected) used journalistic reporting of participants' accounts with little interpretation. Those studies using 'journalistic' reporting by those carrying out the intervention were the weakest, and there were a large number of these. Attention needs to be paid to ways of reducing such potential problems of bias, for example through collaboration with independent researchers or through the adoption rigorous processes of reflexivity. There is a general need for more rigorous application and reporting of qualitative research procedures in the field of arts and health.

While the problem of heterogeneity in both quantitative and qualitative research makes it difficult to synthesise the findings from these studies, it is possible to identify issues for further research. While we found several studies examining the personal and social benefits of drama interventions we found a lack of research on the impact of performing arts other than drama on young people outside of clinical settings. While robust research on the therapeutic effects of arts in clinical settings does exist (Staricoff, 2004), this was outside the scope of the review, which focused more broadly on the health impact of performing arts in non-clinical populations. Hence further research is needed in relation to the use of performing arts in key areas of public health, sexual health and knowledge, attitudes and risk behaviours. While the review found a large number of papers reporting projects discussing the use of music and

other performing arts with young people, many of these were reportage. While such reports can provide useful reflections on practice, there is a need for the application of recognisable processes of data collection and analysis in order to develop the evidence base surrounding performing arts and health.

As well as outcomes research, there is a need for further research on impact and process issues relating to performing arts interventions. Key issues include stakeholder influence (Walsh-Bowers & Basso, 1999); processes of ownership and involvement (Bradley et al. 2004); and challenges and risks of performing arts interventions (Walsh-Bowers & Basso 1999). The qualitative studies also indicate some potentially useful areas of conceptual development. Hence the links between representation (Mattingly 2001) and issues of ownership, empowerment and participation (Bradley et al. 2004) are worthy of exploration.

Limitations of the review

The search was comprehensive and systematic. A large amount of literature was retrieved and it was a labour intensive process to reduce this to a relevant body of work. The use of bibliographic software (Procite) was extremely useful for ensuring this process was systematic, transparent and valid.

The study encompassed a broad definition of young people that extends across the age range (11 –18). While some studies focused on different sub groups within this range, it was not possible to subdivide the group and the differences facing different age groups within this range may not be reflected in the review. Applicability of the findings was strengthened

by exclusion of studies with populations that only included the outer ages (e.g. studies focusing on 8-11 or 18-24 year olds were excluded).

This literature review concentrated only on performing arts interventions: the exclusion of other forms such as creative writing and poetry means that the findings cannot be applied to all arts as they impact on young people.

The literature review focused on performing arts interventions in community settings including mainstream education. Interventions in 'special' settings such as hospital and clinical settings, special schools and prisons were excluded. Hence the particular insights from research on interventions such as music and art therapies in these settings are not included in the review.

Finally, the study only included published literature and some of the 'grey' literature may have been excluded and a body of research (dissertation abstracts) was excluded. The review applied fairly strict methodological inclusion criteria at Phase 2. This means that some studies are excluded including those using post-test only measures, cross sectional surveys and practitioner case studies. The review is therefore focused on high quality empirical research, including robust qualitative research, and not on general forms of knowledge and insight into the impact of performing arts for health on young people.

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Table 1. Databases searched

Database	Initial Hits	Results after relevance screening
AMED (Allied and Complementary Medicine); BNI (British Nursing Index); CINAHL (Cumulative Index to Nursing and Allied Health Literature) EMBASE, HMIC (Health Management Information Consortium)	240	17
ASSIA (Applied Social Sciences Index and Abstracts); BHI (British Humanities Index)	106	19
British Education Index	167	6
CareData	67	7
ChildData	25	10
Cochrane Library	486	19
CommunityWISE	19	6
HealthPromis (Health Development Agency)	44	21
Humanities Abstracts	304	1
IBSS (International Bibliography of the Social Sciences)	82	6
Index to Theses	214	5
MEDLINE	137	7
NRR (National Research Register)	58	12
PsycINFO/SPORTDiscus	805	51
Science Citation Index; Social Sciences Citation Index; Arts and Humanities Citation Index	51	11
SIGLE (System for Information on Grey Literature in Europe)	70	4
Sociological Abstracts	795	0
Total (including duplications)	3670	202

Table 2. Search terms used

Word group 1	Word group 2	Word group 3
Young*	Music*	Evaluat*
Youth	Drama	Research
Adolescen*	Danc*	Intervention*
Teenage*	Singing	Results
Juvenile*	Song*	Outcome*
Pupil*	Theat*	Impact
Student*	Arts	
School*	+	
Curricul*	<i>Not Operating theat*</i>	
Extracurricular	<i>(if necessary)</i>	
Word Group 4		
(added for Sociological Abstracts, and Humanities Abstracts only)		
Self esteem		
Safety		
Risk*		
Prevent*		
Sex*		
Drug*		
Diet*		
Alcohol*		
Smok*		
Tobacco		
Eat*		
Self harm		
Note: All groups combined with AND		

Table 3. Inclusion and exclusion criteria

<p>Inclusion criteria</p> <p>Interventions with children and young people aged 11 to 18 Interventions in community settings including mainstream schools Performing arts interventions (music, drama, dance) Interventions outside of the usual curriculum Papers reporting outcomes and exploring impacts relating to health and wellbeing as a result of interventions English language Papers published from 1984 to 2004 Pre- and post-test measurement of a performing arts intervention (quantitative research) – applied at phase two Recognised procedures for data collection reported (qualitative research) – applied at phase two.</p>
<p>Exclusion criteria</p> <p>Interventions with children under 11 or adults over 18 Interventions with ‘special’ populations, e.g. those in hospitals, clinical settings, special schools and prisons Not performing arts interventions No outcomes or impacts reported Papers published before 1984 Non English language Not a pre and post-test measurement of a performing arts intervention (quantitative research) – applied at phase two No recognised procedures for data collection reported (qualitative research) – applied at phase two</p>

Figure 1. Search strategy and results

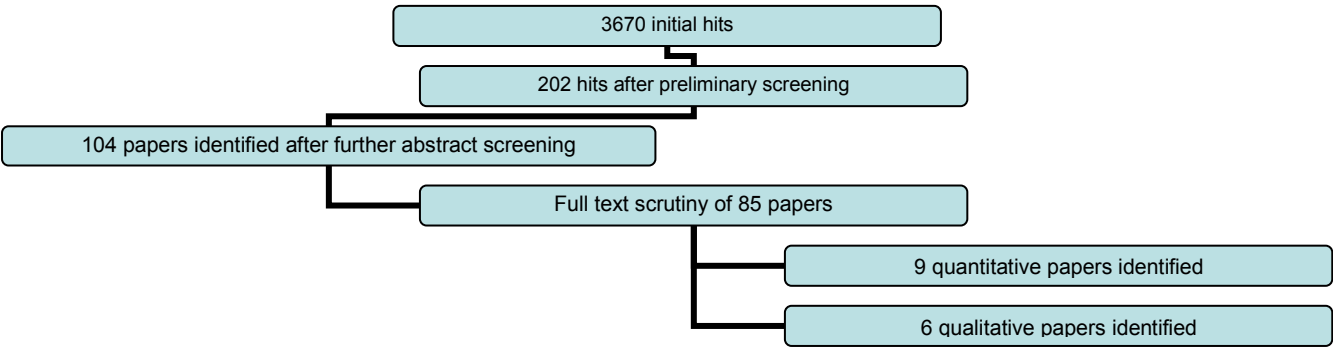


Table 4. Thematic overview of study findings

Peer interaction, social skills and empowerment (7 studies)	
McArdle et al 2002	Drama therapy associated with enhanced wellbeing and short term improvements in behaviour in 'at risk' children
Walsh-Brown & Basso 1999	Two drama interventions with 52 children in an urban elementary school in Ontario, Canada. Improvements in parent rated of social skills and teacher rated interaction following school drama interventions. Drama may not always be a popular option for young people.
Mattingly 2001	A community theatre project offered empowerment to 'at risk' young people by challenging representations of marginalised teenagers.
Bradley et al 2004	Use of drama within a community development approach brought together disparate marginalised youth and helped them tackle various problems in a unified way.
Douglas et al (2000)	Theatre in education project with African and African-Caribbean participants. Benefits include enhanced social skills, performing arts skills and knowledge of health related topics.
Jackson 2003	School students taking part in drama workshops benefited from enhanced self expression and communication.
Lasic & Kenny 2002	Health promotion drama project for 'at risk' secondary school pupils resulted in increased self confidence as well as academic and social benefits.
Knowledge, attitudes and risk behaviour in relation to HIV/AIDS (3 studies)	
Harvey et.al 2000	Improvements in knowledge and attitudes about HIV/AIDS as well as significant increase in condom use reported in students taking part in drama education intervention.
Denman et al. 1995	Improved knowledge and changes in attitude found among secondary school children participating in an HIV/AIDS theatre in education programme.
Elliott et al 1996	Little change in young people's knowledge, attitudes or behaviour in relation to HIV following participation in HIV/AIDS intervention.
Sexual Health (2 studies)	
Lloyd 1999	Include improved sexual knowledge and changes in attitudes concerning availability and access to contraception following participation in a drama production and workshops delivered by a theatre company to secondary school children
Kerr and MacDonald 1995	Educational and social benefits reported following participation by secondary school pupils in an interactive drama performance by student nurses.
Alcohol, tobacco and illegal drug use (2 studies)	
Nelson and Arthur 2003	Two year arts programme. Benefits reported include reduced alcohol and drug use. Pre_ and post_-test evaluation with control/comparison group.
Starkey and Orme 2001	Increased knowledge about drugs in schoolchildren following an interactive drama production and workshop day focusing on alcohol, tobacco and illegal drug use.

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