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The arts and the social determinants of health: findings from an inquiry conducted by the United Kingdom All-Party Parliamentary Group on Arts, Health and Wellbeing

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ABSTRACT

Background: The United Kingdom All-Party Parliamentary Group on Arts, Health and Wellbeing was formed in 2014 and, the following year, initiated an Inquiry into the relationship between arts engagement, health and wellbeing. This led to a substantial report being launched in Parliament in July 2017.

Methods: The Inquiry comprised 16 round-table discussions, a series of expert meetings and a lengthy period of desk-based research. The latter applied a realist method in seeking to reconcile policy, practice and evidence. Consideration of the social determinants of health formed the theoretical framework.

Results: Evidence was found of a beneficial relationship between arts engagement, health and wellbeing across the life course.

Conclusions: Arts engagement can mitigate the social determinants of health by influencing perinatal mental health and child cognitive development; shaping educational and employment opportunities and compensating for work-related stress; building individual resilience and enhancing communities. Further research is needed in this area.

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Introduction

The United Kingdom All-Party Parliamentary Group on Arts, Health and Wellbeing (APPGAHW) was formed in January 2014. The following November, the APPGAHW launched an Arts, Health and Wellbeing Inquiry, to "inform a vision for leadership in the field of arts, health and well being in order to support practitioners and stimulate progress" (All-Party Parliamentary Group on Arts, Health and Wellbeing [APPGAHW], 2016).[1]

The World Health Organization (WHO) defines the social determinants of health as the "conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life" (http://www.who.int/social_determinants/en). A Commission on Social Determinants of Health (2008) identified that the health inequalities between, and the social gradient within, countries were a result of the uneven distribution of power, income, goods and services, including access to healthcare, education, good-quality employment, homes and communities. An editorial in the pages of this journal welcomed the work of the Commission while noting

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the "total absence of references to the arts" in its published guidance (Clift, Camic, & Daykin, 2010, p. 3).

The APPGAHW Inquiry research aimed to bridge the gap between an embrace of strategies tackling the social determinants of health and an acknowledgement of the role the arts can play. This involved consideration of how we are born, grow, work, live and age and how engagement with the arts may diminish the impact of health inequalities at each of these life stages while steps are taken to reduce them.

The final report, entitled *Creative Health: The Arts for Health and Wellbeing* (APPGAHW, 2017), was launched in Parliament on 19 July 2017, at Arts for Health in Manchester two days later and at King's College London on 12 October 2017. Consistent with a focus on the social determinants of health, the evidence presented in *Creative Health* was arranged across the life course. This invited article is intended as a meta-analysis of the larger review making up *Creative Health*. It reframes the evidence presented in the report to amplify consideration of the contribution of arts engagement to mitigating the social determinants of health.

Research approach and methodology

A significant aim of the APPGAHW Inquiry research was to demonstrate ways in which the arts could help to meet policy priorities for health and social care. Early in the process, it became clear that definitions would be needed for the keywords "health", "wellbeing" and "arts".

WHO posits that "Good health for communities is a resource and capacity that can contribute to achieving strong, dynamic and creative societies" (2013, p. 39). This holistic, asset-based definition was adopted for *Creative Health*, and a salutogenic understanding of health was embraced (Antonowsky, 1979), which implies a focus on the development of healthy and healthy-creating societies (Crisp et al., 2016). In this endeavour, the relationship between mental and physical health was taken to be inextricable; as Professor Sir Michael Marmot – Chair of the WHO Commission on Social Determinants of Health – said in endorsing *Creative Health*, "The mind is the gateway through which the social determinants impact upon health" (APPGAHW, 2017).

Wellbeing is notoriously difficult to define, and *Creative Health* took account of international attempts to both describe and measure wellbeing. This included: the Foresight Mental Capital and Wellbeing Project, which paid attention to self-determination and fulfilment in a social context; the Sarkozy Commission, which largely examined the objective factors influencing wellbeing, and the work of the What Works Centre for Wellbeing, which has isolated personal, social and cultural dimensions of wellbeing. The Foresight project noted the inter-relationship between wellbeing and health and noted that a large part of the population, unknown to mental health services but frequently accessing primary care, would benefit from access to interventions designed to improve wellbeing. When it came to measuring wellbeing, the account was taken of a range of psychological scales and the Office for National Statistics Measuring National Wellbeing project, which introduced cultural engagement as a discrete entity into its considerations.

For the purposes of the APPGAHW Inquiry, the arts were understood to include not only the visual arts, dance, film, literature, music and singing but also crafts, gardening and the culinary arts. When considering relationships between the three main variables,

the NAAHW has identified five sites at which the arts, health and wellbeing typically interact:

- Arts in health and care environments – most commonly arts in hospitals and social care settings.
- Participatory arts programmes – individual and group arts activities aimed at attaining and maintaining health and wellbeing, in health and social care settings and community locations.
- Arts on prescription – the referral of people to take part in creative activities, often, but not exclusively, in response to mental health problems.
- Arts therapies – drama, music and visual arts activities targeted at individuals, usually in clinical settings, by any of 3,600 practitioners accredited by the Health and Care Professions Council (HCPC).
- Medical training and medical humanities – inclusion of the arts in the formation and professional development of health and social care professionals (artshealthandwellbeing.org.uk/what-is-arts-in-health).

For the Inquiry, this list was extended in three main ways. Research conducted in the Nordic countries suggests that attendance at cultural events contributes to longer lives better lived (Gordon-Nesbitt, 2015). With this in mind, consideration of the field in which the arts act upon our health and wellbeing was taken to include cultural venues such as concert halls, galleries, heritage sites, libraries, museums and theatres. Secondly, the benefits of participating in creative activity within the home and community are increasingly acknowledged (Conner, DeYoung, & Silvia, 2016). *Creative Health* took "the arts" as "shorthand for everyday human creativity, rather than referring to a lofty activity which requires some sort of superior cultural intelligence to access" (APPGAHW, 2017, p. 19). Thirdly, *Creative Health* emphasised the importance to health and wellbeing of architecture, design, planning and the natural environment.

As the report was initially expected to generate policy recommendations, early research entailed an exploration of policy pertaining to the arts, health and wellbeing, from the (Beveridge, 1942) report on social insurance – which laid the foundations for the National Health Service (NHS) – to the UK's two Culture White Papers written 40 years apart (Department for Culture, Media and Sport, 2016; Lee, 1965). Detailed consideration was given to health policy and legislation from 2010 onwards, which revealed consistent recognition of the social determinants of health including within local authorities (Improvement and Development Agency, 2010). Pertinent in this regard is the Strategic Review of Health Inequalities in England post-2010, commissioned by the Secretary of State for Health and published as *Fair Society, Healthy Lives: The Marmot Review* (Marmot et al., 2010).

Overviews of the field were consulted such as the Royal Society for Public Health Working Group on Arts, Health and Wellbeing [RSPH] (2013) report entitled *Arts, Health and Wellbeing Beyond the Millennium: How far have we come and where do we want to go?* Working through the "hierarchy of evidence", it was found that Cochrane Reviews had been conducted which examined the relationship between arts therapies and the alleviation of anxiety, acquired brain injury, Autism Spectrum Disorder, depression, stress and dementia. While systematic reviews of the impact of participatory arts approaches

were found to be few, examples did exist, particularly in relation to mental health, with advances in this area being made by the What Works Centre for Wellbeing. A full systematic review of the field was rejected in favour of a realist analysis, which entails asking "what works for whom, in what circumstances, in what respects and how" (Pawson, Greenhalgh, Harvey, & Walshe, 2005).

Individual research studies, looking at the relationship between arts engagement, health and wellbeing, were selected for inclusion on the basis of the strength of the evidence presented and its relevance to policy imperatives and the theoretical framework. The researcher to the Inquiry sifted the literature for evidence of impact upon the physical and mental health and wellbeing of participants, analysing a wide variety of data in the process. Care was taken to isolate the unique attributes of arts and cultural engagement, as distinct from other forms of social engagement, and attempts were made to present evidence that controlled for socio-economic variables.

Literature reviews often omit so-called grey literature, including project evaluations. For two months over the summer of 2016, a call for practice examples was made by King's College London on behalf of the APPGAHW. This invited the submission of project details using an evaluative framework commissioned by Public Health England (2016) and developed by Professor Norma Daykin. By the end of the summer, 196 submissions had been received. Over subsequent months, responses were sifted according to the strength of their evaluations, and project details were woven into the report alongside other examples of practice and 16 more detailed case studies.

In parallel with the research, the discursive elements of the Inquiry (meetings and round tables) continued. Themes for round-table discussions were selected on the basis of consultation with parliamentarians and project partners and generally corresponded with areas of the field in which there were felt to be strong examples of practice, a relatively receptive policy environment (such as dementia, wellbeing and social prescribing) and a growing evidence base. Participants were selected on the basis of consultation with the Inquiry's wider networks. Discussions informed the development of the Inquiry and the content and structure of the report. The literature review, call for practice examples and the discursive parts of the Inquiry gave rise to themes which formed the subheadings of each life course chapter, such as Education, Workplace Health and Healthy Ageing. Where possible, evidence and practice were reconciled in the final report.

Between spring 2016 and spring 2017, three meetings were held with an Advisory Group comprising academics, practitioners, organisational leads and funders. The first of these considered a synopsis of the likely content of the report; the second looked at the theoretical basis for the report in the context of the policy and commissioning landscape; the third solicited comments on an early draft of the full report. This yielded further areas of study which were taken into account in the further development of the report.

Over the course of four meetings in November and December 2016, parliamentarians and advisors interrogated and reality tested draft chapters of the report and recommendations aimed at making the arts integral to conceptions of health and well being. Comments received shaped the subsequent development of the Inquiry report and its recommendations.

Results

Consistent with the focus of this article on the arts and the social determinants of health, findings are arranged according to the six routes for overcoming health inequalities identified in the *Marmot Review* (2010, p. 15):

- Give every child the best start in life
- Enable- all children, young people and adults to maximise their capabilities and have control over their lives
- Create fair employment and good work for all
- Ensure a healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role and impact of ill health prevention

Give every child the best start in life

The WHO Commission's call for action began with the prenatal phase and the early physical, social, emotional and cognitive development of children. The British epidemiologist, the late Professor Barker (1995, 1997)), showed that maternal under-nutrition, even for a short period, during the second half of gestation, led to babies with a low birth weight and a greater likelihood of developing coronary heart disease, stroke and diabetes. A study conducted within 2,000 households in deprived communities in London as part of Be Creative Be Well found that 79% of people who engaged with the arts started to eat more healthily (Renton et al., 2012).

One in five mothers suffers from anxiety, depression or, in some cases, psychosis during pregnancy or in the first year after childbirth. Maternal depression is estimated to carry a long-term cost to society of about £8.1bn for every annual cohort of births in the UK, 72% of which relates to negative impacts on the child rather than the mother (Bauer, Parsonage, Knapp, Iemmi, & Adelaja, 2014). Psychosocial factors, such as stress, are known to have an impact on perinatal mental health, which has a knock-on effect on children's long-term development (Donkin, 2014). The *Marmot Review* argued that depression and isolation (which follow the social gradient) have a negative impact upon mother-child bonding and that this can be overcome by supportive interventions.

Participatory arts projects have consistently shown beneficial effects for mothers with postnatal depression. The Music and Motherhood study – led by the Centre for Performance Science, a consortium comprising Imperial College London, the Royal College of Music and Chelsea and Westminster Hospital and involving more than 2,000 women – showed that group singing led to a faster recovery than either creative play or a combination of antidepressants and psychotherapy. The impact was more pronounced in mothers with severe postnatal depression, who recovered a month faster than either of the control groups, showing a reduction in the stress hormone cortisol and bonding better with their babies (Fancourt & Perkins, 2017). Creative Families – initiated as a co-production between Southwark Council's Parental Mental Health Team and South London Gallery and led by artists at the gallery and three local children's centres – involved a series of art and craft programmes. Participating mothers experienced a 77% reduction in anxiety and depression and an 86% reduction in stress; they

increased in confidence and self-determination, and their sense of isolation decreased; as a result, attachment to their children improved (South London Gallery, 2015).

It has been found that 20,000 fewer words per day are addressed to children from poor socio-economic backgrounds than to their wealthier counterparts and that these compromises linguistic development (Hart & Risely, 2001). But the relationship between family income and early childhood development is not fixed (Kelly, Sacker, Del Bono, Francesconi, & Marmot, 2011). A wealth of evidence demonstrates a link between reading aloud to children and greater literacy and comprehension (Save the Children, 2015), informing such initiatives as Read On Get On (https://literacytrust.org.uk/policy-and-campaigns/read-on-get-on/) and the Book Trust's guidance on reading aloud (https://www.booktrust.org.uk/supporting-you/families/reading-tips/). More broadly, engagement with the arts can aid physical, cognitive, linguistic, social and emotional development.

At University College London (UCL) Institute of Education, Professor Susan Hallam has found that "There is considerable and compelling evidence that musical training sharpens the brain's early encoding of sound leading to an enhanced performance on a range of listening and aural processing skills" (2015, p. 10). This contributes to language development, literacy and spatial reasoning and bears a lifelong impact. The Sistema project, imported from Venezuela to England and Scotland, works on the basis that "children from disadvantaged backgrounds can gain significant social benefits by playing in a symphony orchestra" (Harkins, 2014, p. 4). In West Everton, where 52.9% of children are classed as living in poverty (two and a half times the national average), the project has been integrated into the school curriculum, in association with the Liverpool Philharmonic Orchestra and with funding from the Department for Education.

Early childhood creative participation, not only in music-based activities (including singing and dancing) but also in drama, the visual arts and crafts, has been linked to the socio-emotional development of children (Menzer, 2015). Each child with untreated behavioural problems costs the public purse an average of £70,000 by the time they reach 28, 10 times the cost of their peers (Edwards, Céilleachair, Bywater, Hughes, & Hutchings, 2007). A three-year research project in two special schools in London found that children with social, emotional and behavioural difficulties engaging in art, music and drama therapies showed significant improvements in their development and felt safer and more comfortable communicating through the arts than through other means (Cobbett, 2016).

Obesity also follows the social gradient. Children of five from low-income backgrounds are twice as likely and children of 15 three times more likely to be obese than their better-off counterparts (HM Government, 2016). If this carries over into adulthood, there is an increased risk of developing type 2 diabetes (Public Health England, 2014). Childhood obesity affects not only health and mortality but also emotional and behavioural development. The arts have been seen to benefit the management of childhood obesity (Cuypers et al., 2012).

Enable all children, young people and adults to maximise their capabilities and have control over their lives

Education is one of the determinants of health, but the benefits of education are unevenly distributed across the social gradient (Perry & Francis, 2010). Children born into families enjoying a high socio-economic position are able to maintain high scores at

school or improve their scores over time from a lower starting point, whereas the performance of high-scoring children from poorer backgrounds tends to diminish over the first 10 years of their lives, and their lower-scoring counterparts show little improvement (Marmot, 2015).

An Australian study found that "arts education not only has intrinsic value, but when implemented with a structured, innovative and long-term approach, it can also provide essential extrinsic benefits, such as improved school attendance, academic achievement across the curriculum as well as social and emotional wellbeing" (Vaughan, Harris, & Caldwell, 2011, p. 3). A 2017 update of the *ImagineNation* report, published by the Cultural Learning Alliance, 2017, noted that a quarter of children in the UK live in poverty and that cultural learning has a vital part to play in addressing the inequalities in educational attainment and health that arise from this. Various initiatives offer creative participation to children and young people both within and outside school, improving educational achievements and giving rise to a greater sense of responsibility, confidence and self-esteem.

Adverse childhood experience, such as trauma and abuse, increases the likelihood of chronic illness and shortens life expectancy (Dube, Felitti, Dong, Giles, & Anda, 2003; Felitti et al., 1998; Norman et al., 2012). The Art Room is a national charity offering therapeutic interventions for children and young people who find it difficult to engage with learning because of emotional or behavioural difficulties rooted in family circumstances, bereavement, trauma or maltreatment (www.theartroom.org.uk). An independent evaluation of the Art Room showed that sessions significantly reduced students' emotional and behavioural problems and increased their pro-social behaviours, especially within their peer group. Children who had clinical levels of difficulty at the beginning of the sessions showed an 87.5% improvement in their self-reported mood and self-esteem by the end of the programme (Eaude & Matthew, 2005).

A review of literature published between 2004 and 2011, looking at the impact of music, dance, singing, drama and the visual arts undertaken by 11 to 18 year-olds in non-clinical settings, established that "arts/creative projects have the potential to address young people's sense of self-worth and life skills as a mechanism for promoting behaviour change and healthy lifestyles" (Bungay & Vella-Burrows, 2013, p. 51). A 2018 review found evidence that "Meditative activities, group and peer-supported sport and dance may promote subjective wellbeing enhancement in youth" (Mansfield et al., 2018, p. 1). This is particularly pertinent to children in care, who have often been exposed to multiple levels of risk since birth, and to young people in the criminal justice system (Prison Reform Trust, 2016).

A team at Bath Spa University conducted an evaluation of Birmingham Youth Offending Service Youth Music Project. Many of the participants spoke about increases in confidence and social skills, with several re-engaging with education as a result of the programme (Caulfield, Simpson, & Jacobs, 2017). Dance workshops in Camborne, one of the UK's most deprived towns, have been credited with a drop in antisocial behaviour, a 90% reduction in truancy, increased educational attainment and 10 young people a year being prevented from being labelled persistent young offenders (clahrc-peninsula.nihr.ac.uk/research/c2-connecting-communities).

Children from disadvantaged backgrounds are two to threetimes more likely to develop mental health problems (Reiss, 2013), including depression (Chapman et al., 2004). NHS England says that "people with severe and prolonged mental illness die on average 15 to 20 years earlier than other people – one of the greatest health inequalities

in England" (2014, p. 26). A survey of 2,290 people, commissioned by the Mental Health Foundation (2017), found that nearly three-quarters of those within the lowest household income bracket reported poor mental health (compared to three fifths in the highest bracket). The power of the arts – to overcome stress and lift the mood – was acknowledged.

There is a growing body of research linking the onset of psychosis with social adversity across the life course (Kirkbride et al., 2008). After controlling for socio-economic factors, people from minority ethnic groups and of mixed race are at increased risk of all psychotic illnesses (Morgan, Charalambides, Hutchinson, & Murray, 2010). This calls for urgent action in tackling the social determinants of psychosis in disadvantaged and marginalised groups (Morgan & Hutchinson, 2009).

Most first episodes of psychosis happen in adolescence or early adulthood, and the longer conditions like psychosis remain untreated, the worse the eventual outcome can be, but around a quarter of mental health problems are preventable through early intervention during childhood and adolescence. Psychosis is particularly prevalent in Lambeth, Southwark, Lewisham and Croydon, where a quarter of children live in poverty and the rate of new cases of psychosis is double the UK average. An action research project developed in 2015 as a co-production between Dance United and the early intervention in psychosis team at South London and Maudsley Hospital used dance as a form of early intervention in psychosis. The Alchemy Project encouraged 18 to 35 year-olds, with no previous experience of dance, to work with professional dance artists within a team that also included healthcare professionals and peer mentors. Participants demonstrated clinically significant improvements in communication, concentration and focus, levels of trust, team working and wellbeing. The project helped participants to develop relationships with their peers and restore relationships with their families (www.artshealthandwellbeing.org.uk/case-studies/alchemy-project). Seed funding for the Alchemy Project has been discontinued, and this pioneering project has not yet been integrated into care pathways. (See also Colbert, Camic, Cooke, & Springham, 2013).

A collaboration between The Children's Society (2015) and the University of York, looking at subjective wellbeing in children, has suggested that increases in life satisfaction evident from 1994 halted from 2007 onwards. Children experiencing poor wellbeing are more likely to encounter poverty, unemployment and ill health as adults. In February 2017, Age UK published work on wellbeing in later life (Green, Iparraguirre, Davidson, Rossall, & Zaidi, 2017). Data gathered from more than 15,000 respondents was analysed against 40 wellbeing indicators drawn from the Understanding Society survey. Engagement in creative and cultural activities was found to make the highest contribution to overall wellbeing.

At an APPGAHW Advisory Group meeting, Professor Geoffrey Crossick, Director of the Arts and Humanities Research Council Cultural Value Project, noted that "One of the most important things about health is self-reflection and empowerment and a sense that you can actually control what is damaging your health". During the course of the Inquiry, creativity was regularly credited with helping people to increase control over their life circumstances. Empowerment and control are two of the most commonly cited outcomes of social prescribing, or community referral, schemes including arts on prescription (Chatterjee, Camic, Lockyer, & Thomson, 2017).

The population health plan for Greater Manchester Combined Authority (2016, p. 26) acknowledges the "strong inter-relationship between arts and individual and community health as one of the key foundations of building sustainable and resilient communities across Greater Manchester". The next iteration of the plan will include a programme of arts activity in health and social care and in social action on wellbeing, which will make explicit the benefits for people of engaging in art and gaining more control over their lives.

An arts therapist working with people at the end of their lives observes that "The issue of control is often present and powerful. In palliative care or after a particularly lengthy period of medical treatment, clients often feel that they have no control over their illness, their treatment, their progress and life in general. They may also have a lack of control over bodily functions" (Dobbs, 2008, p. 133). Creative activity can increase a sense of control and self-determination at the end of life, with mastery of materials and ideas forming part of the creative process (Bolton, 2008; Hartley & Payne, 2008; Jarrett, 2007).

Create fair employment and good work for all

Employment is one of the determinants of health, but access to healthy work is unevenly distributed across the social gradient. Marmot describes health-damaging work as "characterised by high demand with no control over the work task, by high effort and little reward, by social isolation at work, by job insecurity, by organisational injustice, and by shift work" (2015, p. 172). In Britain, the number of working households in poverty has been increasing (Tinson et al., 2016), partly as a result of zero-hours contracts. This is causing chronic stress for affected families, with damaging physical effects. In 2015–16, an estimated 30.4 million working days were lost to illness and injury in the UK, estimated to cost the economy £100bn per year, just under the entire budget of the NHS. The main causes of sickness absence are anxiety, depression and stress (11.7 million days).

In the USA, creative activity undertaken outside work has been seen to hasten recovery from work strain and enhance work-related performance, leading researchers to conclude that organisations "may benefit from encouraging employees to consider creative activities in their efforts to recover from work" (Eschleman, Madsen, Alarcon, & Barelka, 2014, p. 1). A briefing on workplace health and wellbeing, commissioned by Public Health England from UCL Institute of Health Equity (2014), emphasised the importance to public health and reduced health inequalities of improving psychosocial working conditions. Professor Black (2008), who conducted a review of health at work, told the APPGAHW Inquiry that the people she interviewed about workplace wellbeing had wanted singing, dance classes and reading groups.

Arts-on-prescription programmes in the community demonstrate significant progress in recovery from mental health problems. Arts and Minds, a mental health charity operating in Cambridgeshire and Peterborough, has shown significant reductions in participants' levels of anxiety and depression (Potter, 2015). The Artlift scheme, based in primary care settings in Gloucestershire and Wiltshire, has demonstrated decreases in GP consultations and hospital admissions (Opher, 2011) and improvements in mood and wellbeing (Crone, O'Connell, James, Tyson, & Clark-Stone, 2011; Crone et al., 2013; Loughren, Matthews, Baker, Speke, & Crone, 2014).

With over 1.3 million staff, the NHS is one of the UK's largest employers. Within the NHS, some 10 million working days are lost to sick leave every year, costing £2.4bn – around £1 in

every £40 of the total budget (Boorman, 2009). The Royal College of Physicians (2015) has made explicit the relationship between staff health and patient care. The *Five-Year Forward View for Mental Health*, presented to NHS England by an independent Mental Health Taskforce (2016), found that 51% of ambulance staff and 43% of mental healthcare staff cited work-related stress as the reason for their absence from work. We have already seen that participating in creative activity can diminish stress. It has also been noted that "Art therapy-based interventions can bring much-needed creativity to address work-stress and increase resilience and wellbeing" (Huet, 2015, p. 75).

In September 2015, NHS Chief Executive Simon Stevens announced a major drive to improve and support the health of healthcare staff, dealing with burnout and stress, diet, exercise and physical and mental health (www.england.nhs.uk/2015/09/nhs-workplace). Strategies to counter burnout tend to focus on improving the health and wellbeing of staff outside work. A study of emergency service workers in Canada found that attending cultural events during leisure time improved physical health. Cultural events included concerts, ballet, theatre and museums, and were found to be a means of coping with stress (Iwasaki, Mannell, Smale, & Butcher, 2005). This suggests that cultural engagement may improve the health and wellbeing of staff, having a positive impact on patient wellbeing and outcomes.

Ensure a healthy standard of living for all

The conditions in which we experience life have a profound effect upon our physical and mental health and wellbeing (Friedli, 2009). In order to understand how this works, we need to differentiate between positive stress (eustress), which is necessary to perform well, and negative stress (distress), which hampers human flourishing (www.apa.org/helpcenter/stress-kinds.aspx). At a molecular level, socio-economic disadvantage – and the chronic distress it causes for both children and adults – has negative effects on biological pathways and cellular functions (Borghol et al., 2012; Hertzman & Boyce, 2010; Shonkoff & Garner, 2012).

Distress causes alterations to the non-coding part of DNA. Such epigenetic changes may be incurred before birth and accumulate throughout the life course (Barker, 1995, 1997; Power & Hertzman, 1997), exacerbated by environment and compounded by factors like obesity, to increase susceptibility to such conditions as coronary heart disease, chronic obstructive pulmonary disease (COPD) and stroke (Galobardes, Lynch, & Davey Smith, 2004). Data from more than 60,000 people demonstrate a direct link between psychological distress and cardiovascular disease (Lewis, 2012). It is important to note, however, that the social determinants of health are mutable, and "poverty is not destiny" (Marmot, 2015, p. 124). As people's circumstances alter, so too do their responses to health-affecting factors (Walsh, Bendel, Jones, & Hanlon, 2010). Stress levels can diminish, and epigenetic changes can be reversed through exposure to better environments. This implies that, rather than being an optional extra, good-quality environments are fundamental to improving health and wellbeing.

Both urban design and housing have an impact upon people's health and wellbeing (Commission for Architecture in the Built Environment, 2002). More money is spent on treating the health problems of people living in circumstances unfit for human habitation than is spent on public housing stock (Barrow & Bachan, 1997). People who

perceive their surroundings as beautiful experience better mental and physical health, but the perception of environmental beauty is unevenly distributed across the social gradient (Harvey & Julian, 2015). Environmental improvement aids school readiness – the level of preparedness to succeed cognitively, socially and emotionally in school and a predictor of educational success – which is unevenly distributed across the social gradient (four in five children in poorer areas outside London are not ready to begin school at the age of five). A leading Swedish epidemiologist, Professor Bygren (2013), posits arts engagement as a form of environmental enrichment that might contribute to better health.

Creative Homes acknowledges the household environment to be one of the paramount influences on a child's healthy brain development (Design Council, New Economics Foundation & Narativ, 2016). With 25% of children in London living in overcrowded conditions, rising to 43% in the social rented sector, and low incomes putting a strain on family relationships, Creative Homes identifies the need to avert consequential health and care challenges. The charity facilitates live arts experiences in homes, including households in social or sheltered housing and dependent on benefits, with one or more children under five. Trained artists, including storytellers, dancers and musicians, share with families skills that directly tackle the stresses of daily life. An analysis of Creative Homes showed a 64% improvement in the quality of household routines, a 23% increase in play at home and a 27% increase in singing with children (creativehomes.tdlp.co.uk/wp-content/uploads/2016/05/Impact-report-summary_digital.pdf).

Housing quality correlates with health throughout life. The average life expectancy for homeless people is 47 (Crisis, 2011). The incidence of mental health problems among homeless people (four in five) is much higher than in the general population (one in six). Art making offers a temporary haven for people who have no home of their own; it offers time away from fear and intimidation; it offers scope to begin healing (https://arthur-martha.com/portfolio/the-homeless-library/).

Create and develop healthy and sustainable places and communities

The *Marmot Review* advised that "The physical and social characteristics of communities, and the degree to which they enable and promote healthy behaviours, all make a contribution to social inequalities in health" (2010, p. 30). The poorest people in the UK tend to live in environments with the greatest number of hazards, such as pollution, noise and flooding (Joseph Rowntree Foundation, 2005). The National Planning Policy Framework contains a section dedicated to the promotion of healthy communities, which acknowledges the role planning can play in "facilitating social interaction and creating healthy, inclusive communities" (Department for Communities and Local Government, 2012, p. 17). To this end, the framework advises community involvement in the development of residential areas and facilities.

Physical or visual access to green spaces, water, or natural light has a powerful direct impact on subjective wellbeing (O'Donnell, Deaton, Durand, Halpern, & Layard, 2014, p. 65). Exposure to green environments has been found to reduce the effects of income deprivation, particularly in relation to all-cause mortality and circulatory disease (Mitchell & Popham, 2008). A study (Mitchell, Richardson, Shortt, & Pearce, 2015) of more than 21,000 urban residents in 34 European nations found that access to open spaces helped to diminish

wellbeing inequalities. A report (Buck, 2016) commissioned from the King's Fund by the National Gardens Scheme pointed to evidence that gardens and gardening have a range of positive impacts upon health and wellbeing across the life course, from encouraging healthy eating to ameliorating loneliness and reducing anxiety, depression and stress. Gardening is often offered alongside arts activities in community organisations committed to the restoration of health and wellbeing.

A review of evidence showed that engaging with museums provides: positive social experiences, leading to reduced social isolation; opportunities for learning and acquiring news skills; calming experiences, leading to decreased anxiety; increased positive emotions, such as optimism, hope and enjoyment; increased self-esteem and sense of identity; increased inspiration and opportunities for meaning-making; positive distraction from clinical environments, including hospitals and care homes; increased communication between families, caregivers and health professionals (Chatterjee & Camic, 2015; Chatterjee & Noble, 2013).

A survey conducted by the National Alliance for Museums, Health and Wellbeing found over 600 different museum-based programmes targeting health and wellbeing outcomes (Lackoi, Patsou, & Chatterjee et al., 2016). Paul Hamlyn Foundation's Our Museum initiative encourages museums and galleries to play a significant and enduring part in their communities (ourmuseum.org.uk), and the case is being advanced for them to be considered part of the public health milieu (Camic & Chatterjee, 2013).

Libraries are at the centre of communities, encouraging reading and offering creative sanctuary. Healthy Libraries is a partnership between public health and the libraries information service in Norfolk which has the aim of turning all libraries in the area into health and wellbeing hubs. In response to local need, Norfolk libraries offer a range of creative and other activities. The initiative has been welcomed by staff and public alike, and the activities have become integrated into the day-to-day running of libraries (www.youtube.com/watch?v=497ha86-fZc).

The Age-Friendly Cities and Communities initiative, launched by WHO in 2006, recognises the contribution of older people to society, makes provision for their diverse needs and promotes their inclusion in all aspects of community life (World Health Organization, 2007). Although the arts are not specifically mentioned as part of the Age-Friendly Cities initiative, Age-Friendly Manchester, launched in 2007, united 19 cultural organisations "to extend the reach of the city's world-class arts and culture to older people in Manchester" (campaigntoendloneliness.org/guidance/case-study/culture-champions-age-friendly-manchester-2). Four years later, a cultural champions scheme was launched, which sees ambassadors within local communities raising awareness of the cultural events taking place and encouraging older people to attend and contribute. An age-friendly cultural coordinator, funded through public health and based at the Whitworth, supports cultural organisations and more than 150 cultural champions to encourage older adults to engage with the arts.

There is a growing impetus to create dementia-friendly communities. These are defined as "A city, town or village where people with dementia are understood, respected and supported, and confident they can contribute to community life. In a dementia-friendly community people will be aware of and understand dementia, and people with dementia will feel included and involved, and have choice and control over their day-to-day lives" (Alzheimer's Society, 2013, p. 2; Local Government Association, 2015). Alzheimer's Society has looked at the role of arts centres within such communities and published a guide to creating dementia-

friendly arts venues (Allen et al., 2015). This is based on an understanding that the 850,000 people in the UK diagnosed with dementia and their informal carers (approximately 700,000 people) represent a significant audience that arts venues may have overlooked.

It is widely recognised that "relationships are a major determinant of health" (White, 2009, p. 3), and arts engagement is regularly cited as a forum for building trusting relationships. By contrast, we have seen that being marginal to society has a deleterious effect upon health (Marmot, 2015). Members of BAME communities, for example, are less likely to seek access to psychological therapies, and opportunities for early intervention are being missed, causing unnecessary distress and placing pressure on acute services (Fitzpatrick, Kumar, Nkansa-Dwamena, & Thorne, 2014). On the other hand, BAME participants are well represented within arts activities orientated towards the restoration and preservation of mental health. To take just one example, in Creative Families (mentioned above) only 28% of participants identified as white British.

Strengthen the role and impact of ill health prevention

In October 2014, NHS England published the *Five Year Forward View*, which argued that "the future health of millions of children, the sustainability of the NHS, and the economic prosperity of Britain all now depend on a radical upgrade in prevention and public health" (p. 9). This pivotal health plan requires the nation to take prevention seriously, to reduce health inequalities and ensure that health resources are not consumed unnecessarily by treating preventable conditions.

Primary prevention relates to people who are at high risk of encountering a health issue for the first time; secondary prevention refers to those who have already encountered the issue but seek to avoid it recurring; and tertiary prevention pertains to people undergoing treatment (www.euro.who.int). During his time as Chair of Arts Council England (ACE), Sir Peter Bazalgette (2014) made the case that the arts had a significant part to play in addressing the prevention agenda. The ACE-funded Cultural Commissioning Programme sought to encourage interactions between the arts and the commissioning of services within the public sector, including health. This worked on the understanding that "Arts and culture has been shown, through a range of project examples and evaluations, to contribute to primary and secondary prevention, which aim to prevent harm occurring" (New Economics Foundation, 2016, p. 19).

The arts have a significant part to play in preventing illness and infirmity from developing in the first place and worsening in the longer term. We have already seen that an environment enriched through the arts – including the natural and built environment – can reduce susceptibility to chronic physical and mental health conditions in children and working-age adults. Ageing is generally accompanied by a decline in sensorimotor, cognitive and physical performance. Falls are the main cause of emergency hospital admission for older people and a major factor in people moving from their own homes into long-term care, estimated to cost the health service £2.3bn per year (Age UK, 2016). Falls prevention strategies are calculated to reduce falls by 35 to 54% (Age UK, 2013). One hour of dancing per week for six months by healthy older people has been shown to benefit cognitive, tactile and motor performance (Kattenstroth, Kalisch, Holt, Tegenthoff, & Dinse, 2013). Dancing in Time, a programme set-up to explore dance as a form of falls prevention in Leeds, found an 85% adherence rate for those who took part in the project, compared to 40% for standard NHS falls prevention courses.

In the USA, the Creativity and Ageing Study looked at the impact of weekly participatory arts programmes over two years. This involved 300 ethnically diverse participants (half of whom formed a control group) aged between 65 and 103 and dispersed across three states. Activities included painting, pottery, dance, music, poetry and drama. The study found "true health promotion and disease prevention effects", with increases in self-reported health and wellbeing and reduced medical appointments and requests for medication. At the same time, arts participation led to increased independence, reducing "risk factors that drive the need for long-term care", including falls (Cohen et al., 2006, p. 733).

The *Marmot Review* found that social participation increased healthy life expectancy. Social participation in older age is considered more beneficial for health than giving up smoking (Marmot, 2015). By contrast, social isolation – defined as less than weekly contact with family, friends or neighbours – is estimated to affect more than two million people over 60 in the UK, with those on low incomes twice as likely to feel trapped and lonely than their more affluent counterparts. An estimated 1.2 million older people in the UK are chronically lonely (Local Government Association, 2016). Isolation, which accounts for up to a third of GP visits, is associated with poor physical and mental health and significantly increases the risk of dementia (Cutler, 2009). Arts engagement, which often involves social interaction, is being offered as an antidote to loneliness by local authorities and voluntary organisations in a range of (primarily rural) locations.

When it comes to secondary prevention, a research team has studied the impact of group singing for people with COPD, which has shown improved lung function and quality of life (Clift et al., 2013). The British Lung Foundation has embraced the health and wellbeing benefits of singing for chronic lung conditions (www.blf.org.uk/support-for-you/singing-for-lung-health/improve-your-breathing), and various groups have been set-up around the country to encourage singing so as to improve breathing in people with COPD. Gloucester Clinical Commissioning Group has commissioned a series of 12 feasibility projects across the life course, exploring how arts-based approaches can help in the self-management of a range of chronic health conditions including type 1 diabetes, dementia, cancer, chronic pain, obesity, depression and anxiety.

If the onset of Alzheimer's disease (which accounts for 62% of dementias) can be delayed by five years, savings between 2020 and 2035 are estimated at £100bn (Department of Health, 2015). For every person with dementia living at home, rather than in residential care, savings to social care budgets of £941 per month (£11,296 per year) are made (alzheimers.org.uk). Research into the delay of dementia is at an early stage. A longitudinal study of 469 people aged over 75, who showed no signs of dementia at the outset, found dancing to be particularly associated with reduced onset of dementia (Verghese et al., 2003). This drew upon data from the Bronx Ageing Study and focused on the preventative rather than the palliative. A larger longitudinal study of 1,375 people in Sweden found that both participatory creative activity (including painting and drawing, classified as mental activity) and cultural attendance (understood as a social activity) had a protective effect against dementia (Wang, Karp, Winblad, & Fratiglioni, 2002).

A research team led by Professor Nina Kraus, Director of the Auditory Neuroscience Laboratory at Northwestern University in Illinois has found that short-term auditory training increases the plasticity of the brain in older adults, potentially bolstering resistance to dementia (Anderson, White-Schwoch, Choi, & Kraus, 2014). A study of the Rhythm for Life project at the Royal College of Music probed this preventative effect and

found a positive impact for older adults learning to play an instrument (Korte, Perkins, & Williamon, 2013). A 2014 study of post-retirement adults found that participants who produced art over 10 weeks showed greater functional connectivity in the brain, together with stress reduction and psychological resilience (Bolwerk, Mack-Andrick, Lang, Dörfler, & Maihöfner, 2014).

A 2016 review of research into community-based literary, performing and visual arts for people with dementia showed that "arts-based activities had a positive impact on cognitive processes, in particular on attention, stimulation of memories, enhanced communication and engagement with creative activities" (Young, Camic, & Tischler, 2016, p. 337). Yet, while arts attendance followed by art making was found to improve episodic memory, the impact of such sessions on mood, confidence and social engagement were regarded as equally important (Eekelaar, Camic, & Springham, 2012). In engaging the creative capacity of people with dementia, the emphasis is placed on improved quality of life, in which arts engagement has a significant part to play.

Discussion/conclusions and implications

While the evidence base is stronger in some areas than others and further research is needed, it would seem that creative and cultural activity occupies the mind in ways that interact with the social determinants of health. Without wishing to over claim, the APPGAHW envisages arts engagement as a factor that can help to diminish the effects of health inequalities at the same time as policies are implemented to eradicate their causes. If this proposition is accepted, it stands to reason that arts engagement should be promoted across the social gradient according to need.

Since 2005, DCMS, in partnership with ACE, English Heritage and Sport England, has carried out a survey of cultural and sporting engagement known as Taking Part (www.gov.uk/guidance/taking-part-survey). Analysis of data generated by the survey has shown that people who visit museums and galleries are disproportionately prosperous, well-educated professionals in the 55 to 74 age range, who also visited museums and galleries when they were young. When it comes to participating in creative activities, the picture is the same in terms of education and occupation, with the older generation joined by those aged between 16 and 19 years and both age groups having been encouraged by their parents to be creative. In both attendance and participation, ethnicity is a factor, with museum and gallery visitors unlikely to be black or Asian and arts participants most likely to be white. As a result of their wider circumstances, both attendees and participants tend to enjoy good health (Inglis & Williams, 2010). Throughout the UK, the over-representation of certain groups, and the under-representation of others, at publicly funded arts events is acknowledged to be a problem.

The overarching recommendation made in the *Marmot Review* is that strategies for tackling health inequalities should be applied proportionally across the social gradient. Such "proportionate universalism" advocates that resources are allocated on a sliding scale according to need. In direct contrast to the normal demographics of publicly funded culture, people engaging with the arts through health routes tend to be experiencing poor health. Disadvantaged and marginalised groups are disproportionately affected by ill health and, as a result, are well represented within arts and health activities. In a reciprocal relationship, the arts provide a route to better health and well

being while health provides a route to the arts that can help to overcome persistent inequalities. This means that arts and health activities often inadvertently conform to the model of proportionate universalism.

In April 2017, the House of Lords Select Committee on the Long-term Sustainability of the NHS concluded that "The reductions in health inequalities called for by the Marmot Review have yet to be realised" (2017, p. 9). The APPG on Wellbeing Economics (2014) suggests that available public subsidy to the participatory arts be distributed across the social gradient with a view to ironing out inequalities in wellbeing. The APPG on Arts, Health and Wellbeing endorses this proposition and advocates that it is extended to include health, with arts engagement being encouraged across the lifecourse. This implies a role for the arts in reducing health conditions exacerbated by inequalities. It also suggests that the arts are taken seriously as a form of prevention and early intervention, as part of a humane health service that will benefit from the savings this strategy will yield.

Creative Health offers 10 recommendations aimed at making arts engagement integral to health and social care. These are variously addressed to government, NHS trusts, local authorities and health and social care commissioners, research and cultural funding bodies and universities and were devised in consultation with representatives of these groups. If the recommendations are implemented, the arts will be intrinsic to health and social care. If the arts are to realise their full impact in mitigating the effects of social disadvantage, this approach must be extended into the wider community.

Note

1. http://www.artshealthandwellbeing.org.uk/appg-inquiry/.

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References

Age UK. (2013). *Falls prevention exercise: Following the evidence*. London: Author.

Age UK. (2016). *Later life in the United Kingdom*. London: Author.

Allen, P., Brown, A., Camic, P., Cutler, D., Harvey, L., Pasiecznik Parsons, M., … Zeilig, H. (2015). *Becoming a dementia-friendly arts venue: A practical guide*. London: Alzheimer's Society.

All-Party Parliamentary Group on Arts, Health and Wellbeing. (2016). *Arts, health and wellbeing inquiry*. London: Author. Retrieved from http://www.artshealthandwellbeing.org.uk

All-Party Parliamentary Group on Arts, Health and Wellbeing. (2017). *Creative health: The arts for health and wellbeing*. London: Author.

All-Party Parliamentary Group on Wellbeing Economics. (2014). *Wellbeing in four policy areas: Report by the all-party parliamentary group on wellbeing economics*. London: Author.

Alzheimer's Society. (2013). *Guidance for communities registering for the recognition process for dementia-friendly communities*. London: Author.

Anderson, S., White-Schwoch, T., Choi, H. J., & Kraus, N. (2014). Partial maintenance of auditory-based cognitive training benefits in older adults. *Neuropsychologia*, *62*, 286–296.

Antonowsky, A. (1979). *Health, stress and coping*. San Francisco: Jossey-Bass.

Barker, D. (1995). Fetal origins of coronary heart disease. *British Medical Journal*, *311*, 171–174.

Barker, D. (1997). Fetal nutrition and cardiovascular disease in later life. *British Medical Bulletin*, *53* (1), 96–108.

Barrow, M., & Bachan, R. (1997). *The real cost of poor homes: Footing the bill*. London: Royal Institute of Chartered Surveyors.

Bauer, A., Parsonage, M., Knapp, M., Iemmi, V., & Adelaja, B. (2014). *The costs of perinatal mental health problems*. London: Centre for Mental Health.

Bazalgette, P. (2014, December 28). Use the arts to boost the nation's health. *The Observer*.

Beveridge, W. (1942). *Social insurance and allied services* (No. Cmd 6404). London: HM Government.

Black, C. (2008). *Working for a healthier tomorrow: Dame Carol Black's review of the health of Britain's working age population*. London: The Stationery Office.

Bolton, G. (Ed.). (2008). *Dying, bereavement and the healing arts*. London: Jessica Kingsley Publishers.

Bolwerk, A., Mack-Andrick, J., Lang, F. R., Dörfler, A., & Maihöfner, C. (2014). How art changes your brain: Differential effects of visual art production and cognitive art evaluation on functional brain connectivity. *PLoS One*, *9*(7). doi:10.1371/journal.pone.0116548

Boorman, S. (2009). *NHS health and wellbeing: Final report*. London: Department of Health.

Borghol, N., Suderman, M., McArdle, W., Racine, A., Hallett, M., Pembrey, M., … Szyf, M. (2012). Associations with early-life socio-economic position in adult DNA methylation. *International Journal of Epidemiology*, *41*, 62–74.

Buck, D. (2016). *Gardens and Health: Implications for policy and practice*. London: The King's Fund.

Bungay, H., & Vella-Burrows, T. (2013). The effects of participating in creative activities on the health and wellbeing of children and young people: A rapid review of the literature. *Perspectives in Public Health*, *133*(1). doi:10.1177/1757913912466946

Bygren, L. O. (2013). Intergenerational health responses to adverse and enriched environments. *Annual Review of Public Health*, *34*, 49–60.

Camic, P., & Chatterjee, H. (2013). Museums and art galleries as partners for public health interventions. *Perspectives in Public Health*, *133*(1), 66–71.

Caulfield, L., Simpson, E., & Jacobs, C. (2017). *An evaluation of the Birmingham youth offending service youth music project (compliance, completion, and success)*. Bath: Bath Spa University.

Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, *82*, 217–225.

Chatterjee, H. J., & Camic, P. M. (2015). The health and wellbeing potential of museums and art galleries (editorial). *Arts & Health Special Issue: Culture, Museums and Wellbeing*, *7*(3), 183–186.

Chatterjee, H. J., Camic, P. M., Lockyer, B., & Thomson, L. J. (2017). Non-clinical community interventions. A systematised review of social prescribing schemes. *Arts & Health*. doi:10.1080/17533015.2017.1334002

Chatterjee, H. J., & Noble, G. (2013). *Museums, health and wellbeing*. Oxford: Routledge.

The Children's Society. (2015). *The good childhood report 2015*. London: Author.

Clift, S., Camic, P., & Daykin, N. (2010). The arts and global health inequities. *Arts & Health: an International Journal for Research, Policy and Practice*, *2*(1), 3–7.

Clift, S., Morrison, I., Skingley, A., Page, S., Coulton, S., Treadwell, P., … Shipton, M. (2013). *An evaluation of community singing for people with COPD (Chronic Obstructive Pulmonary Disease)*. Canterbury: Sidney De Haan Research Centre for Arts and Health.

Cobbett, S. (2016). Reaching the hard to reach: Quantitative and qualitative evaluation of school-based arts therapies with young people with social, emotional and behavioural difficulties. *Emotional and Behavioural Difficulties*, *21*(4). doi:10.1080/13632752.2016.1215119

Cohen, G. D., Perlstein, S., Chapline, J., Kelly, J., Firth, K. M., & Simmens, S. (2006). The impact of professional conducted cultural programs on the physical health, mental health and social functioning of older adults. *The Gerontologist*, *46*(6), 726–734.

Colbert, S., Camic, P., Cooke, A., & Springham, N. (2013). The arts in psychotherapy: The art-gallery as a resource for recovery for people who have experienced psychosis. *The Arts in Psychotherapy*, *40*, 250–256.

Commission for Architecture and the Built Environment. (2002). *The value of design: How buildings and spaces create economic and social value*. London: Author.

Commission on the Social Determinants of Health. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health final report of the commission on social determinants of health*. Geneva: World Health Organization.

Conner, T., DeYoung, C. G., & Silvia, P. J. (2016). Everyday creative activity as a path to flourishing. *The Journal of Positive Psychology*, *13*(2), 181–189.

Crisis. (2011). *Homelessness: A silent killer: A research briefing on mortality amongst homeless people*. London: Author.

Crisp, N., Stuckler, D., Horton, R., Adebowale, V., Bailey, S., Baker, M., … Warwick, C. (2016, October 7). Manifesto for a healthy and health-creating society. *The Lancet*, *1–4*. doi:10.1016/S0140-6736(16)31801-3

Crone, D., O'Connell, E., James, D., Tyson, P., & Clark-Stone, F. (2011). *ArtLift, gloucestershire*. Cheltenham: University of Gloucestershire.

Crone, D., O'Connell, E. E., Tyson, P. J., Clark-Stone, F., Opher, S., & James, D. V. (2013). 'Art lift' intervention to improve mental wellbeing: An observational study from UK general practice. *International Journal of Mental Health Nursing*, *22*(3), 279–286.

Cultural Learning Alliance. (2017). *ImagineNation: The value of cultural learning*. London: Cultural Learning Alliance.

Cutler, D. (2009). *Ageing artfully: Older people and professional participatory arts in the UK*. London: The Baring Foundation.

Cuypers, K., De Ridder, K., Kvaløy, K., Skjei Knudtsen, M., Krokstad, S., Holmen, J., & Holmen, T. L. (2012). Leisure time activities in adolescence in the presence of susceptibility genes for obesity: Risk or resilience against overweight in adulthood? The HUNT study. *BMC Public Health*, *12*, 820.

Department for Communities and Local Government. (2012). *National planning policy framework*. London: DCLG.

Department for Culture, Media and Sport. (2016). *The culture white paper* (White Paper No. Cm 9218). London: HM Government.

Department of Health. (2015). *Prime Minister's challenge on dementia 2020*. London: Author. citing Knapp, M., Comas-Herrera, A., Wittenberg, R., Hu, B., King, D., & Rehill, A. (2014). *Scenarios of dementia care: What are the impacts on cost and quality of life?*

Design Council, New Economics Foundation & Narativ. (2016). *Knee high design challenge impact evaluation: Final report*.

Dobbs, S. (2008). Art therapy. In N. Hartley & M. Payne (Eds.), *The creative arts in palliative care*. London: Jessica Kingsley Publishers.

Donkin, A. (2014). *Local action on health inequalities: Good quality parenting programmes and the home to school transition*. London: Public Health England.
Dube, S. R., Felitti, V. J., Dong, M., Giles, W. H., & Anda, R. F. (2003). The impact of adverse childhood experiences on health problems: Evidence from four birth cohorts dating back to 1900. *Preventive Medicine*, *37*, 268–277.
Eaude, T., & Matthew, S. (2005). *Making space for re-engagement: An evaluation of educational provision at the art room*. Oxford: New Perspectives.
Edwards, T., Céilleachair, A., Bywater, T., Hughes, D. A., & Hutchings, J. (2007). Parenting programme for parents of children at risk of developing conduct disorder: Cost effectiveness analysis. *British Medical Journal*, *334*(75), 682.
Eekelaar, C., Camic, P., & Springham, N. (2012). Art galleries, episodic memory and verbal fluency in dementia: An exploratory study. *Psychology of Aesthetics, Creativity, and the Arts*, *6*(3), 262–272.
Eschleman, K. J., Madsen, J., Alarcon, G., & Barelka, A. (2014). Benefiting from creative activity: The positive relationships between creative activity, recovery experiences, and performance-related outcomes. *Journal of Occupational and Organizational Psychology*, *87*, 579–598.
Fancourt, D., & Perkins, R. (2017). Associations between singing to babies and symptoms of postnatal depression, wellbeing, self-esteem and mother-infant bond. *Public Health*, *145*, 149–152.
Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V. J., … Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, *14*(4), 245–258.
Fitzpatrick, R., Kumar, S., Nkansa-Dwamena, O., & Thorne, L. (2014). *Ethnic inequalities in mental health: Promoting lasting positive change report of findings to LankellyChase Foundation, Mind, The Afiya Trust and Centre for Mental Health*. London: LankellyChase Foundation.
Friedli, L. (2009). *Mental health, resilience and inequalities*. Geneva: World Health Organization.
Galobardes, B., Lynch, J. W., & Davey Smith, G. (2004). Childhood socioeconomic circumstances and cause-specific mortality in adulthood: Systematic review and interpretation. *Epidemiologic Reviews*, *26*, 7–21.
Gordon-Nesbitt, R. (2015). *Exploring the longitudinal relationship between arts engagement and health*. Manchester: Arts for Health.
Greater Manchester Combined Authority. (2016). *The greater manchester population health plan 2017–2021*. Manchester: Author.
Green, M., Iparraguirre, J., Davidson, S., Rossall, P., & Zaidi, A. (2017). *A summary of age UK's index of wellbeing in later life*. London: Age UK.
Hallam, S. (2015). *The power of music: A research synthesis of the impact of actively making music on the intellectual, social and personal development of children and young people*. London: University College London.
Harkins, C. (2014). *Evaluation plan: Sistema Scotland's Big Noise programmes in Raploch, Stirling and in Govanhill, Glasgow*. Glasgow: Glasgow Centre for Population Health.
Hart, B., & Risely, T. R. (2001). The early catastrophe: The 30 million word gap by age 3. *American Educator*, *27*(1), 4–9.
Hartley, N., & Payne, M. (Eds.). (2008). *The creative arts in palliative care*. London: Jessica Kingsley Publishers.
Harvey, A., & Julian, C. (2015). *A community right to beauty: Giving communities the power to shape, enhance and create beautiful places, developments and spaces*. London: ResPublica.
Hertzman, C., & Boyce, T. (2010). How experience gets under the skin to create gradients in developmental health. *Annual Review of Public Health*, *31*, 329–347.
HM Government. (2016). *Childhood obesity: A plan for action*. London: Author.
House of Lords Select Committee on the Long-term Sustainability of the NHS. (2017). *The long-term sustainability of the NHS and adult social care* (Report of Session 2016–17 No. HL 151). London: House of Lords.
Huet, V. (2015). Literature review of art therapy-based interventions for work-related stress. *International Journal of Art Therapy*, *20*(2), 66–76.

Improvement and Development Agency. (2010). *The social determinants of health and the role of local government*. London.
Inglis, G., & Williams, J. (2010). *Models of sporting and cultural activity: Analysis of the taking part survey*. London: Department for Culture, Media and Sport.
Iwasaki, Y., Mannell, R. C., Smale, B. J. A., & Butcher, J. (2005). Contributions of leisure participation in predicting stress coping and health among police and emergency response services workers. *Journal of Health Psychology*, *10*(1), 79–99.
Jarrett, L. (Ed.). (2007). *Creative engagement in palliative care: New perspectives on user involvement*. Oxon: Radcliffe.
Joseph Rowntree Foundation. (2005). *Environmental problems and service provision in deprived and more affluent neighbourhoods*. London: Author.
Kattenstroth, J.-C., Kalisch, T., Holt, S., Tegenthoff, M., & Dinse, H. R. (2013). Six months of dance intervention enhances postural sensorimotor and cognitive performance in elderly without affecting cardio-respiratory functions. *Frontiers in Aging Neuroscience*, *5*(5). doi:10.3389/fnagi.2013.00005
Kelly, Y., Sacker, A., Del Bono, E., Francesconi, M., & Marmot, M. (2011). What role for the home learning environment and parenting in reducing the socioeconomic gradient in child development? Findings from the millennium cohort study. *Archives of Disease in Childhood*, *96*, 832–837.
Kirkbride, J., Barker, D., Cowden, F., Stamps, R., Yang, M., Jones, P., & Cold, J. (2008). Psychoses, ethnicity and socio-economic status. *The British Journal of Psychiatry*, *193*, 18–24.
Korte, M., Perkins, R., & Williamon, A. (2013). *Learning to perform in older adulthood: Implications for physical and mental wellbeing*. London, UK: Royal College of Music. paper to the International Symposium on Performance Science in Vienna, reprinted in *The Author*, 459–464.
Lackoi, K., Patsou, M., Chatterjee, H. J., (2016). *Museums for health and wellbeing: A preliminary report, national alliance for museums, health and wellbeing*. Retrieved from museumsandwellbeingalliance.wordpress.com
Lee, J. (1965). *A policy for the arts: First steps* (White Paper No. Cmnd. 2601). London: HM Government.
Lewis, G. (2012). Psychological distress and death from cardiovascular disease. *British Medical Journal*, *345*, e5177.
Local Government Association. (2015). *Dementia friendly communities: Guidance for councils*. London: Author.
Local Government Association. (2016). *Combating Loneliness: A guide for local authorities*. London: Age UK.
Loughren, E., Matthews, J., Baker, C., Speke, C., & Crone, D. (2014). *Artlift Gloucestershire update report 2011–2014*. Cheltenham: University of Gloucestershire.
Mansfield, L., Kay, T., Meads, C., Grigsby-Duffy, L., Lane, J., John, A., & Victor, C. (2018, May 16). Sport and dance interventions for healthy young people (15–24 years) to promote subjective wellbeing: A systematic review. *BMJ Open*, *8*, e020959.
Marmot, M. (2015). *The health gap: The challenge of an unequal world*. London: Bloomsbury.
Marmot, M., Allen, J., Goldblatt, P., Boyce, T., McNeish, D., Grady, M., & Geddes, I. (2010). *Fair society, healthy lives: The Marmot review*.
Mental Health Foundation. (2017). *Surviving or thriving? The state of the UK's mental health*. London: Author.
Mental Health Taskforce. (2016). *The five year forward view for mental health: A report from the independent mental health taskforce to the NHS in England*. London: The Mental Health Taskforce.
Menzer, M. (2015). *The arts in early childhood: Social and emotional benefits of arts participation a literature review and GAP analysis (2000–2015)*. Washington DC: Office of Research & Analysis National Endowment for the Arts.
Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *Lancet*, *372*(9650), 1655–1660.

Mitchell, R., Richardson, E., Shortt, N., & Pearce, J. (2015). Neighbourhood environments and reduced socio-economic inequalities in mental wellbeing: An international study of urban dwellers. *American Journal of Preventive Medicine*, *49*(1), 80–84.
Morgan, C., Charalambides, M., Hutchinson, G., & Murray, R. M. (2010). Migration, ethnicity, and psychosis: Toward a Sociodevelopmental model. *Schizophrenia Bulletin*, *36*(4), 655–664.
Morgan, C., & Hutchinson, G. (2009). The social determinants of psychosis in migrant and ethnic minority populations: A public health tragedy. *Psychological Medicine*, *39*, 1–5.
New Economics Foundation. (2016). *The art of commissioning: How commissioners can release the potential of the arts and cultural sector*. London: Author.
NHS England. (2014). *Five year forward view*. Leeds: Author.
Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: A systematic review and meta-analysis. *PLoS Medicine*, *9*(11), e1001349.
O'Donnell, G., Deaton, A., Durand, M., Halpern, D., & Layard, R. (2014). *Wellbeing and policy*. London: Legatum Institute.
Opher, S. (2011). *Cost-benefit evaluation of artlift 2009–2012: Summary*. Gloucester: Gloucestershire County Council and NHS Gloucestershire.
Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2005). Realist review – A new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*, *10*(1), 21–34.
Perry, E., & Francis, B. (2010). *The social class gap for educational achievement: A review of the literature*. London: Royal Society for the encouragement of Arts, Manufactures and Commerce.
Potter, S. (2015). *Arts on Prescription 2010–12*. Cambridge: Arts & Minds.
Power, C., & Hertzman, C. (1997). Social and biological pathways linking early life and adult disease. *British Medical Bulletin*, *53*(1), 210–221.
Prison Reform Trust. (2016). *In care, out of trouble: How the life chances of children in care can be transformed by protecting them from unnecessary involvement in the criminal justice system*. London: Author.
Public Health England. (2014). *Adult obesity and type 2 diabetes*. London: Author.
Public Health England. (2016). *Arts for Health and Wellbeing: An evaluation framework*. London: Public Health England.
Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Science & Medicine*, *90*, 24–31.
Renton, A., Phillips, G., Daykin, N., Yu, G., Taylor, K., & Petticrew, M. (2012). Think of your art-eries: Arts participation, behavioural cardiovascular risk factors and mental wellbeing in deprived communities in London. *Public Health*, *126*, S57–S64.
Royal College of Physicians. (2015). *Work and wellbeing in the NHS: Why staff health matters to patient care*. London: Author.
Royal Society for Public Health Working Group on Arts, Health and Wellbeing. (2013). *Arts, health and wellbeing beyond the millennium: How far have we come and where do we want to go?* London: The RSPH and the Philipp Family Foundation.
Save the Children. (2015). *Ready to read: Closing the gap in early language skills so that every child in Wales can read well*. London: The Save the Children Fund.
Shonkoff, J. P., & Garner, S. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, *129*, e232–e246.
South London Gallery. (2015). *Making it together: An evaluative study of creative families, an arts and mental health partnership between the South London Gallery and the Parental Mental Health Team*. London: Author.
Tinson, A., Ayrton, C., Barker, K., Born, T. B., Aldridge, H., & Kenway, P. (2016). *Monitoring poverty and social exclusion 2016*. London: Joseph Rowntree Foundation.
UCL Institute for Health Equity. (2014). *Local action on health inequalities: Workplace interventions to improve health and wellbeing*. London: Public Health England.
Vaughan, T., Harris, J., & Caldwell, B. J. (2011). *Bridging the gap in school achievement through the arts*. Victoria: The Song Room.

Verghese, J., Lipton, R. B., Katz, M. J., Hall, C. B., Derby, C. A., Kuslansky, G., & Buschke, H. (2003). Leisure activities and the risk of dementia in the elderly. *The New England Journal of Medicine*, *348*, 2508–2516.

Walsh, D., Bendel, N., Jones, R., & Hanlon, P. (2010). It's not 'just deprivation': Why do equally deprived UK cities experience different health outcomes? *Public Health*, *124*, 487–495.

Wang, H.-X., Karp, A., Winblad, B., & Fratiglioni, L. (2002). Late-life engagement in social and leisure activities is associated with a decreased risk of dementia: A longitudinal study from the Kungsholmen project. *American Journal of Epidemiology*, *155*(12), 1081–1087.

White, M. (2009). *Arts development in community health: A social tonic*. Oxford: Radcliffe.

World Health Organization. (2007). *Global age-friendly cities: A guide*. Geneva: Author.

World Health Organization Regional Office for Europe. (2013). *Health 2020: A European policy framework and strategy for the 21st century*. Copenhagen: Author.

Young, R., Camic, P., & Tischler, V. (2016). The impact of community-based arts and health interventions on cognition in people with dementia: A systematic literature review. *Aging & mental health*, *20*(4), 337–351.