

The National Women and Children's Creative Health Handbook: Wellbeing by Design



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For: Improving Me – A Women and Children's Partnership

It is vital that we understand and intervene on the ways in which income inequality intersects with gender inequality, creating social gradients in women's health, capabilities and capacities that in turn create inequalities in child wellbeing. Interventions that encompass creativity and the arts and are a fantastic approach - enriching families' lives and culture and respecting their dignity. A brilliant handbook.

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Preface

There are three main messages to be taken away from this handbook:

Firstly, if we are serious about reducing health inequalities we need to acknowledge that a social gradient persists in preterm birth risk and in children's access to positive early experiences. Child health is everyone's responsibility. We need to give every child the best start in life (1).

Secondly, we need to understand why life expectancy at birth for England's poorest women has fallen. Furthermore, as discussed by MBRRACE (2) we need to critically examine in tandem significant differences in maternal mortality rates. Why are black women five times more likely to die as a result of complications in their pregnancy than white women? There is a clear need to better utilise the evidence we have and understand what it is telling us. Namely, we urgently need to explore the complexity of these inequalities and to address them, also considering what the implications are for policy and practice.

Thirdly, creativity, the arts and culture have a significant role in addressing unfair and avoidable differences in health. The evidence base on the value of such cultural interventions and the opportunity this presents is vast but largely untapped. This needs to change. Therefore benefits accruing from adoption of health policy that embraces non-clinical interventions are manifest.

Acknowledgements

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‘We need to work across sectoral, professional and organisational divides to create a whole system multi-agency approach to bring about the change necessary so that all children have the opportunity to fulfil their potential and women’s lives are not lost. Early access to the arts and culture empowers children, it gives babies a head start. It provides a powerful force for bonding and it is a proven antidote to postnatal depression. It feeds a baby’s intellect, supports emotional development, reduces social isolation, boosts the skills that are learned through creativity and collaboration. These early experiences fuel individual and community health and wellbeing. They are good for people and the economy.’

**Nicola Gitsham
Head of Social Prescribing
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Foreword

Our country is full of amazing children, young people, parents and families. But the hard, inconvenient reality is that British children today have some of the worst outcomes across health, education, social care, justice and poverty in the developed world as outlined in *The British Betrayal of Childhood* (3). It is our view that we adults must internalise this truth, then allow it to be heard widely, before our communities are truly ready to make the huge changes needed to transform British childhood for the better.

The COVID-19 pandemic has been a terrible period in so many ways. Perhaps, though, we can offer a glimmer of hope! The glittering prize if we choose to accept the challenge is nothing less than the opportunity to reset British childhood. Perhaps as we emerge into a new post-COVID-19 world, society will think again about who we are and where we are going. Why do we retain this optimism in the midst of what is admittedly a gloomy picture? Because we have seen, and know, so many willing and able people ready to lead and join a movement to put children at the centre of our society. We know individuals and organisations with passion, skills, innovation and knowledge to build on what has gone before. We think that the trouble isn't enough willing and able people, but that advocates for a better childhood are currently stuck. Stuck because hard work isn't having the impact desired. Stuck because siloed working is so difficult to break out of. And stuck because the gap between what is needed and what seems possible is cavernous.

So where do we go from here?

We say that we must start with the mindset that the child is at the centre. The centre of healthcare services, of schools, of outdoor space, the built environment, care systems, courts and job-centres. This is already enshrined in the UN Convention on the Rights of the Child (4), especially Article 12, the "Right to be Heard". So we are only calling for what is already agreed. Once this transformation in mindset is achieved, so much is unlocked. We adults then start asking children and young people to tell us what they think. And we can listen with genuine empathy and with a mindset of action. In this transformed future, child needs and rights are put to decision makers by a coherent and united lobby of children, young people, parents and caring adults. Egos, power structures, and professional boundaries are cast aside in favour of unity of purpose. If a child doesn't want to miss school to see a professional, that professional comes to them, perhaps lessons learned in COVID-19 will be useful in this regard. If they wish to engage in discussions about changing foster carer, they are actively encouraged to do so. And if they are "too young", they are supported to input wherever they can, and - particularly for babies - their parents are listened to with kindness.

This new future puts promotion of health and wellbeing front and centre. Needs are identified and intervention is early. Society recognises that what happens during people's childhoods is of lifelong ramification for them, and in turn is what determines the sort of societies we build into the future.

We recognise that we start from a difficult place, but we think that the phenomenal children of the United Kingdom can have better. This handbook shows us a way. Are our public and politicians up to the challenge?



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Introduction

Disadvantage and health inequality start before birth and accumulate throughout life

There has been an unprecedented rise in Infant mortality rates in England which has disproportionately affected the poorest areas of the country (5). Taylor Robinson et al (6) argue, 'infant mortality is a sensitive indicator of the changing overall health of societies, and as such acts as an early warning system for future adverse trends' (p. 1).

Women should be supported during pre-conception, antenatal care, labour, birth and the post-natal period

By the age of three years, eighty percent of a child's brain development is complete. Clear milestones including speech and language, social skills, pointing and grasping, as well as crawling and walking are in place. None of this is possible without a healthy pregnancy and a safe birth (7). It is therefore crucial to ensure all mothers have the right care and are safe and supported throughout their pregnancy. This is a critical investment to support both a mother's wellbeing and that of their child.

Moreover, prenatal stress and increases in maternal cortisol levels can have damaging effects on both mothers and their babies, with consequences for maternal health and child development (8). It can increase preterm births and impact indirectly on infant development by predisposing mothers towards perinatal depression which can then affect the quality of postnatal care. Preterm birth is strongly related to the incidence of physical and intellectual challenges babies face. The earlier a baby is born, the more likely they will have health problems. Some of these problems may not show up for several years, even into adulthood.

The foetal environment can be altered in response to maternal stress, by increasing foetal cortisol levels (a stress hormone), and this can have an impact upon the developing child (9). Stress in the expectant mother can make the child more likely to develop emotional or cognitive problems such as anxiety and language delay (9). Furthermore, stress during and after pregnancy is common, with one in five women experiencing mental health problems during pregnancy or within the first year following birth (10). Post-natal depression (PND), affects more than one in every ten women and suicide is the leading cause of maternal death (11,12).

Environment, socioeconomic status, and living conditions are important determinants of health

Environmental and lifestyle factors are all important in ensuring the prevention of ill health in early years, but too many mothers and their families do not have access to the resources required to support health promoting behaviours. Rising levels of family poverty have increased child health inequalities. This is all compounded by the fact more women live in poverty, with female-headed households more likely to be poor. Within environments of deprivation, children are also more likely to have poor health outcomes. Likewise, families with less resource tend to have the least access to environments which support health and wellbeing. In 2015, the *Due North Report* by Public Health England (13) found that regional differences in overall economic development, including weak labour markets, lower living standards, higher unemployment rates and more worklessness coupled with lower living standards in the north, compared to the south increased the burden of ill health in the North of England substantially.

A good start is key in reducing health inequalities across the life course

It is quite staggering that those born in the wealthiest areas of England live up to 20 years longer on average than those in the country's poorest areas in the North of England (14). Early childhood is a critical period in determining life chances. Children who start off well inevitably have firmer foundations on which future developments build. This is why it is so important to ensure that all children have the best possible start in life. This means ensuring mums are in good health before and during pregnancy, as well as providing support in the early weeks that follow birth. Supporting mums and dads in their transition to parenthood is equally crucial. Good parenting supports babies to develop secure attachments and ultimately learn self-regulation strategies, important building blocks for resilience too. Family and community social capital are also strongly associated with differences in children's and adolescents' experiences of health and wellbeing (15). That is why children and adolescents thrive in family environments that are nurturing and cohesive.

The evidence base is clear

In November 2019 the WHO Health Evidence Network Synthesis Report (HEN 67) brought together the global evidence on the role of the arts in improving health and wellbeing. This signalled an important step change in the role of the arts in health. Drawing on the results of more than 3,000 studies, the report demonstrated how the arts can support prevention of ill health and health promotion, as well as the management and treatment of illness across the lifespan (16).

This handbook seeks to build on this body of knowledge and create a focus on the role of the arts, informed by thinking in public health, in providing an opportunity for non-invasive, tailored interventions that can play an important role in addressing the health inequalities facing women, thereby supporting mothers, babies and children in having a better future. Together with the Inquiry Report, *Creative Health: The Arts for Health and Wellbeing* (17), and a range of psychological, psychosocial, biological and epidemiological research it provides a strong case for the value of creative health interventions to individuals and to society (18–22).

However, despite this burgeoning evidence base, the implementation of arts interventions in the UK is limited; we have some excellent case studies and examples of best practice, but more needs to be done to act on the evidence that we have and mobilize it within the healthcare system.

This is where this resource comes in. Drawing together the key evidence on the role of the arts in supporting the health and wellbeing of mothers, babies, young people and children, we highlight the key reasons that investment in a creative health agenda is necessary to respond to major health challenges and rising inequalities.

The resource is divided into three sections:

- pregnancy, labour and birth;
- newborn and early years; and
- children and young people.

We underline the burden of the challenges across these life junctures, as well as highlighting the cost to individuals and society, and then outline what contribution the arts and culture can make.

It may seem that the arts can only ever ameliorate the symptoms of disadvantage and inequity. What is important to recognise is the personal and community agency that such approaches promote which can and do impact positively on societal change and growth.

Pregnancy, labour and birth



What are the key challenges?

The Marmot Review (2010) made it clear that, 'the foundations for virtually every aspect of human development – physical, intellectual and emotional – are laid in early childhood' starting in the womb (1). The conditions in which a child is born and grows has huge implications for educational achievement, mental wellbeing and economic status as well as disease development and management. In 2020, Health Equity in England: The Marmot Review 10 Years On, reiterated the need to give every child the best start in life in order to reduce health inequalities (23).

Maternal obesity in pregnancy is strongly associated with cardiovascular disease and mortality rate in the offspring. A longitudinal study in Aberdeen by the University of Edinburgh also found babies born to mothers who were obese during pregnancy are three times more likely to develop type 2 diabetes in later life (24).

Alcohol exposure in the womb is the world's leading cause of a group of disorders that affect the development of the nervous system, including brain damage, learning disabilities and behavioural problems (25). Foetal Alcohol Spectrum Disorders (FASD) is a term used to describe impacts on the brain and body of babies exposed to alcohol during pregnancy. FASD cannot be cured, reversed or outgrown; 'it permanently compromises lives and life chances. It is characterised by a history of school failure, substance abuse, as well as being troubled and in trouble' (26).

There is strong, consistent evidence from studies worldwide that smoking during and after pregnancy increases the risk of Sudden Infant Death Syndrome (SIDS), whereby the more cigarettes, the greater the risk (27). Men and women who smoke are also more likely to have fertility problems and take longer to conceive than non-smokers.

Breastfeeding levels remain consistently low in the UK. There is a clear social gradient in uptake, with young mums and those from poorer and disadvantaged backgrounds being markedly less likely to breastfeed. This can contribute to worsening existing inequalities and ongoing cycles of deprivation (28). And yet there is not enough focus on supporting women in the crucial weeks after the baby's birth which means key messages about the benefits of breast feeding are missed and practical support is lacking. Babies who are not breastfed have a greater risk of developing asthma or allergies (29). Babies who are not exclusively breast fed for six months, without any formula, also have more ear infections, respiratory illnesses and bouts of diarrhoea. Baby formula is more difficult to digest than breast milk and this creates more problems with reflux for babies and this adds to the stress new mums face. Bottle fed babies experience less skin to skin touching and less eye contact which can also impact negatively on infant bonding and security.

Mental health

The Maternal Mental Health Alliance estimate that more than 1 in 10 women experience poor mental health during pregnancy or in the first year after birth (30). This is known as the perinatal period. Perinatal mental health includes both pre-existing mental illnesses and those that develop during pregnancy, which are greatly exacerbated in the perinatal period. Psychosocial factors, such as stress and social isolation have a huge impact on perinatal mental health. The chronic stress associated with financial instability and poverty also impact on parent-child bonding and parenting abilities. Marmot et al. (31) argue that depression and isolation which follow a social gradient can be overcome by supportive interventions.

Anxiety and depression are common during pregnancy, particularly in the period leading to labour and immediately after giving birth. The WHO identifies gender as a critical determinant of mental health and mental illness. They also report unipolar depression as being twice as common in women as men (32).

Women may experience fear in relation to giving birth (33), and anxiety may be associated with depression and low levels of social support (34,35). Anxiety disorders are also prevalent, with obsessive-compulsive disorder and generalized anxiety disorder higher in women who have recently given birth than in the general population (36). For those who have given birth prematurely and been separated from their new baby, mothers report sense of loss, emptiness, and frustration (37).

Mental health problems affect the baby too, with research showing that anxiety during pregnancy can slow development, resulting in lower birth weight (38). This can impact later development of the child, with anxiety during pregnancy associated with decreased gray matter density in 6–9-year-old children (39). Gray matter includes regions of the brain involved in muscle control and sensory perception such as seeing and hearing, memory, emotions, speech, decision making and self-control.

Loss of a baby can cause intense and prolonged grief, including bereavement-related major depression, post-traumatic stress disorder and complicated grief, with recovery or ‘normalisation’ of psychosocial effects taking 5-18 years (40–43). Loss of a baby is also a risk factor for relationship break-down, increasing the risk of parental separation by 40% (41). The UK has had a relatively high rate of neonatal mortality; in 2016, 2.8 neonatal deaths were recorded for every 1,000 births (40). However, in 2019 Taylor-Robinson et al. (6) reported on a study which assessed the impact of a ‘sustained and unprecedented increase in infant mortality between 2014 and 2017’ (p.1), which showed greater increases in the most income-deprived local authority areas. This report attributed about a third of the increase to child poverty.

“ Loss of a baby can cause intense and prolonged grief with ‘normalisation’ of psychosocial effects taking 5–18 years

Physical health

Difficulty sleeping and insomnia during pregnancy are common (44), with symptoms tending to worsen during later stages of pregnancy as the baby grows (45). Blood pressure can also rise during pregnancy and this can be associated with complications, including pre-eclampsia (46). Giving birth prematurely can impact the health of the baby, with a higher prevalence of neurodevelopmental deficits in preterm children (47).

Although the pain reported during labour varies greatly in intensity, it has been described as ‘extremely painful’ and ‘dangerous to women with cardiovascular problems’ (48), and labour may increase the perception of pain due to muscle tension resulting from fear and anxiety (49). Pain during birth is therefore understood as connected to both physiological and psychosocial factors (50,51), resulting in the ‘fear-tension-pain cycle’ (52,53).

The physical birthplace environment may affect the experience of birth too, including perceptions of pain (52). There is a growing body of research that indicates a well-designed hospital improves the quality of patient/staff/visitor experience and can impact on the length of stay and recovery period.

There is a need for better designed hospitals and more choice in relation to place of birth (54). Research identifies access to natural light as a factor in reducing hospital stays, aligning with arguments that humans have innate tendencies to want to connect with nature and all forms of life. Biophilic architectural design is one approach that aims to connect building occupants more closely with nature. Explaining further, biophilic designed buildings explore what makes a space a good place for humans incorporating natural lighting and ventilation, natural landscape features and other elements for creating a more productive and healthier built environment. Building designers have a clear role in ‘designing for positive health impacts’ (55).

“ Mental health problems experienced during pregnancy and birth are considered to cost society around £8.1 billion each year

Maternity care policy has promoted choice for over twenty years. The Department of Health ‘national choice guarantee’ stipulates all women have a choice of place of birth, whether in hospital, in a birth centre or at home; yet only 13% of women in England currently give birth in settings other than obstetric units (56). This is in spite of the fact that women experience fewer interventions when they plan to give birth in birth centres (midwifery units), or at home.

What are the costs?

Mental health problems experienced during pregnancy and birth are considered to cost society around £8.1 billion for each one-year cohort of births in the UK, equating to nearly £10,000 for every birth in the country (57).

Specialist services are needed to support the mental health of new and expectant mothers, but worryingly less than 15% of health care providers offer the level of support required, with over 40% offering no service at all (57).

Cost of physical health problems

There is a significant evidence base to draw upon as to the proven health benefits associated with breast feeding and potential NHS savings. They also include a reduced risk of breast cancer. These are highlighted in the medical journal Archives of Disease in Childhood (58). They estimated that by increasing breast feeding rates in neonatal units from 35%-75% it could save £6 million per year by reducing the incidence of necrotising enterocolitis. This is a medical condition where a portion of the bowel dies. If the percentage of women who breastfed for at least four months increased by 7% to 45%, the NHS would save £11 million per year from a reduction in the types of common infant conditions previously described. Equally, to save £21 million from breast cancer, breastfeeding rates for women would have to halve the number who have never breastfed (from 32% to 16%) and double the number of women who breastfed for 7 to 18 months (from 16% to 32%) (58).

Foetal Alcohol Spectrum Disorders (FASD)

As mentioned by McQuire et al. (59), the societal and economic costs associated with FASD are considerable, estimated at \$1.8 billion per year in Canada. The UK has the fourth highest level of prenatal alcohol use in the world, yet rates of FASD are unknown. Bristol University looked at the development of 13,495 children from Bristol’s Children of the 90s study, who were born in and around Bristol between 1991 and 1992. Up to 25% of these children were exposed to binge levels of alcohol in pregnancy. They also found up to 17% of the children in the sample screened positive for symptoms of FASD (59).

What can the provision of the arts do?

Music

Music listening and music therapy interventions during pregnancy have been shown to reduce stress, anxiety and depression (60,61), including the anxiety of medical procedures, for example amniocentesis (60). For women suffering from sleep disturbances, music listening interventions may improve sleep quality and reduce stress (62), and for those with

“ An increase in breast feeding could save the NHS £40 m a year

“ Music listening for new mothers in NICU can reduce stress hormones and increase breast milk expression

pre-eclampsia, music therapy can lower blood pressure, alleviate negative emotions and improve quality of life (63). Listening to relaxing music during labour can lower anxiety levels and reduce pain, as well as speed up labour (64,65). Group singing sessions for women and their babies can improve mood in the weeks following birth (66).

Music interventions during pregnancy can impact upon later stages; for example, improving the experience of labour by reducing anxiety, blood pressure and heart rate, resulting in less need for medication (67,68).

For babies born prematurely, music listening and lullaby singing can benefit heart rate, respiration and sucking/feeding, with premature females discharged from NICU an average of 15.7 days sooner than those not receiving a music intervention, and premature males discharged an average of 8.2 days sooner (69). Longer term benefits of listening to music in NICU have also been recorded, such as emotional benefits at 12 and 24 months of age, including lower fear and anger (47). Furthermore, music listening for new mothers in NICU can reduce stress hormones in the body and increase breast milk expression (70-72).

Visual arts and literature

Group art therapy including drawing, creating mandalas, puppet making, collage and photography can provide support in the final trimester of pregnancy for those who have a heightened fear of childbirth, reducing both depression and anxiety (73). Parental bedside reading to premature babies, such as reading aloud from children's books, also improves oxygen saturation for as long as one hour after reading exposure, suggesting that parental voice is important for cardiorespiratory stability (74).

For parents who have lost a baby, it is essential to provide appropriate support, and the visual arts can raise awareness of this (41). For example, reflecting on 'amulet' artwork exploring infant loss has enabled student midwives to gain insight into the grieving process, thereby emphasising the value of compassionate care (75). Compassionate bereavement photography offered by well-trained professional photographers can also be valuable for those experiencing loss, providing the opportunity to preserve memories (76).

Design

The built environment can disrupt communication and increase stress for staff and patients. So improving the design of birth units and better understanding how certain specific design characteristics improve healthcare outcomes is essential (77). Moreover, the physical characteristics of birth spaces can have both direct and indirect impact on maternity care, influencing behaviours, experiences and birth health outcomes such as maternal pain (54). Preliminary research has shown that optimising maternity spaces using auditory, visual and tactile stimulation is positive for women, providing distraction, relaxation and comfort (78,79). One study found that installation of a specifically designed screen in the labour and delivery room of a hospital reduced the duration of labour by more than two hours, with requests for pain relief 7% lower (80).

“ Parental bedside reading to premature babies improves oxygen saturation for as long as one hour after reading exposure

Case studies

Lullaby Project

The Lullaby Project, formed at Carnegie Hall New York in 2011, pairs pregnant women, new mothers and fathers with musicians to write and sing personal lullabies for their babies; supporting maternal health, aiding childhood development, and strengthening parent and child bonds. The project reaches parents in health and educational settings, homeless shelters, foster care and prisons. Participants are primarily drawn from communities which are facing challenges. The project enables partner organisations to support families in their own communities. In 2017 the Irene Taylor Trust (London) piloted the project with young migrant mothers and refugees and fathers in prisons. In 2019, Operasonic brought the project to Wales. Evaluation of the project has shown that song writing can increase connection with others, improve confidence for new mothers and enhance communication, in addition to providing an outlet to express emotions, thereby increasing agency and wellbeing (81).

BookTrust and Bookstart

BookTrust knows that it is never too soon to start reading with babies (82). Their Bookstart programme has been running for over twenty years, reaching families in the first year of their baby's life with books and resources to start a reading habit. Given out by early years champions, Bookstart is very much part of the fabric of early parenthood. Its universal reach means that early reading is truly democratised. Every year more than half a million children benefit from Bookstart and resources which are continually updated. Bookstart corner brings families together in reading with children. Practitioners say the sessions and free resources help build confidence in parents, like Rachael, who attended a four-week course in Wigan with Molly, 23 months. Wigan Libraries run Bookstart Corner as a course over four weeks, one hour a week, so parents do not feel bombarded with information. The course leader said, 'taking home the resource allows learning to continue at home... Rachael sent us a few pictures of Molly enjoying using the resources at home. The free resources we receive from BookTrust are amazing and allow us to enhance children's learning within the community.'

Bumps to Bookworms

Leicestershire County Council Libraries developed a partnership with family centre workers to support mums in their third trimester with babies and toddlers (0-5). They developed a family programme with sessions that track a child's development, beginning with a focus on a baby's first encounter with books. Sessions support parents to consider the importance of books in a child's development and explore impact that early and continued sharing of words and books makes to a child's long-term success. Sally White, Library Outreach explains, 'by introducing reading, rhymes, books and library use to embed reading, books and library lending with parents, the project develops parent's confidence in using books and rhymes as the child grows, and ensures they understand the importance and relevance of what they do.'

Babigloo

Babigloo work with Poole's local authority children centres supporting families who may be experiencing anxiety, postnatal depression or other difficulties. Babigloo uses a non-verbal approach to music making using music and theatrical provocations to support the development of babies aged 0 to 18 months. Babigloo musicians create multi-sensory environments which create curiosity, and encourage listening, communication and playfulness between babies and their parents or carers. Sessions balance structured activities which build on a babies' sensory perceptions, with spontaneous vocal and non-verbal interaction with the babies. Their approach is music-led, and based on the music education theories pioneered by the American Professor Edwin E. Gordon. Sessions encompass storytelling, dance and theatrical props (83).

Newborn and early years



What are the key challenges?

Mental health

Postnatal depression (PND) is a type of depression that new parents may experience within the first year following childbirth (84). It is a common problem that affects around 12.9% of women during their first postnatal year (12,85). Symptoms can vary but may include mood swings, emotional distress, insomnia, confusion, guilt and suicidal thoughts (84), with psychosocial factors such as stress and lack of social support viewed as predictors (86). PND can develop into more serious mental illness and, if left untreated, can even lead to suicide (84,87), with suicide in the UK viewed as the leading cause of maternal death in the first year following birth (11).

“ PND affects around 12.9% of women during their first postnatal year and can even lead to suicide if left untreated ”

New mothers are not the only individuals affected by PND; it can adversely affect the health and wellbeing of their families and their infants too (88). Infants of depressed mothers are more likely to be insecurely attached (89), and have compromised cognitive development (90), with an ongoing impact into childhood, such as adversely affecting behaviour (91) and academic performance (92).

One to two in every 1,000 women are affected by postnatal psychosis within the first month following the birth (93,94). This can be a potentially life-threatening condition (93), with symptoms including hallucinations, delusions, manic mood, feeling fearful and confusion (95).

Mental health problems also affect young children, with emotional and behavioural problems viewed as high, with studies suggesting that mental health problems affect around 18% of children aged 1.5 years (96,97). Behavioural problems in early years can have longer term impact later in life too such as increased use of alcohol and drugs, and likelihood of criminal behaviour (97-99). Moreover, although a developing area of study, research now suggests that adverse childhood experiences (ACEs) affect 61% of adults and that preventing ACEs could reduce a range of health conditions in adulthood, including heart disease and depression (100).

The term ACEs refers to a range of *adverse childhood experiences* which include on-going physical or emotional abuse, exposure to chronic neglect or domestic violence, substance abuse and mental ill health, or simply the strains associated with constant family hardship. ACEs have acquired considerable traction in recent years, but it is a contentious field. In principle, ACEs provide both an explanation for problems and a measure for preventive interventions (100). However, critics argue ACEs focus too much on family households at the expense of the wider determinants of health, such as material and social deprivation and entrenched inequalities (101). Critics point out the presence of caring adults and stable environments are equally necessary components contributing to a child's healthy development and resilience. Safe, stable, nurturing relationships between children and their parents or caregivers act as a buffer against the effects of toxic stress and other ACEs. In fact, research has shown that the presence of supportive relationships is more critical than the absence of ACEs in promoting wellbeing (102). If parents are struggling, other adults – like teachers, youth workers and coaches – can be present to provide the safe, stable, nurturing relationships that a child needs. This suggests if we invest in support and promoting policies that strengthen families, we can help set them up for future success.

Physical health

PND can bring with it physical symptoms such as fatigue, irritability and changes to appetite (85). Mothers of those born early may also have to spend extra time in hospital as their babies are more likely to have breathing problems (103).

Breastfeeding is a key part of child development, but many UK babies are often not breastfed. Some health conditions such as mammary hypoplasia or polycystic ovary syndrome (PCOS) may mean that it is more difficult to produce milk (104–106), but it can also be a choice. This decision is influenced by a range of complex factors such as attitude and support from friends and family, as well as social class, cultural norms, tradition and marketing (107–109). Furthermore, around 1 in 20 women do not know how to breastfeed and feel that healthcare providers don't give enough support (107). Promotion and education in relation to breastfeeding is important because not breastfeeding may have serious health implications (109). For example, babies are more likely to have stomach and breathing problems, with increased rates of diabetes, obesity and dental disease seen in early childhood (109–111). The importance of breastfeeding is also recognised by the World Health Organization (WHO) who state that it is a 'global public health recommendation' that babies are fed exclusively with breast milk in the first six months to ensure 'optimal growth, development and health' (110).

Dental caries in the UK merit a specific mention in this context. Tooth extractions are the most common reason for children to be admitted to hospital in the UK. In England alone, more than 44,000 children are referred to hospital to have the treatment under general anaesthetic, either because the planned treatment is extensive or the child concerned is unable to manage with the treatment whilst awake. The extractions are of teeth affected by dental caries and when extensive, the diseased teeth cause pain and sepsis and sleepless nights for the child and their parents. Yet dental decay is almost always preventable.

Overall, the oral health of children is improving in the UK. Unfortunately, this is not true among the most deprived. An oral health survey (112) of five year olds in 2019 revealed about one in four (23 per cent) of five-year-olds have had dental decay, while children from more deprived areas are more than twice as likely to have dental decay.

In 2019, the Government published a green paper (113) on prevention stating that to give children a better start in life, oral health needed to be much better. The consultation document referenced the need to extend tooth brushing programmes in early years settings and targeted water fluoridation schemes.

The British Society for Paediatric Dentistry has produced videos (114) providing parents with valuable tips for keeping their children's teeth healthy.

What are the costs?

Economic projections suggest that a 'modest increase' in breastfeeding could save the NHS over £17 million per annum (109,115). This is estimated in relation to the costs that would be saved treating acute diseases in infants such as those relating to stomach and breathing problems (109).

Between 2018/2019 it is estimated that the cost of tooth extractions to the NHS was over £40 million, up from £27.4 million the previous year. The real cost to our children is immeasurable.

“ Increasing the number of women who breastfeed could save the NHS over £17 million per annum

What can the provision of the arts do?

Music

The importance of the role of music in evolutionary adaption has been well researched, with suggestions that music (in particular singing) facilitates mother-infant bonding (116,117). Singing lullabies can significantly improve postnatal mother-infant bonding in the first three months after birth when compared to normal care (118), and daily singing to babies has improved mother-infant bonding in the first nine months following birth (119). Regular singing can improve the mental health and wellbeing of new mothers too, including reducing symptoms of PND by 38% and leading to a faster recovery (120), with enhancing mother-infant bond found to be a key factor in these outcomes (121).

Singing is beneficial when babies are born prematurely, such as reducing crying episodes (118), supporting mothers in coping (122) and helping babies to gain weight (123-125). As babies start to develop, singing can also sustain visual attention (126), modulate arousal (127), and support language development (128,129).

Music listening and music interventions can support breast milk production, including increasing the fat content of expressed milk and reducing stress for mothers (130-131, 72). As well as this, integrating song into monthly breastfeeding promotion sessions has supported women in adopting recommended breastfeeding practices (132).

“ Singing can reduce symptoms of PND by 38% and lead to faster recovery

Storytelling and reading

Telling stories can be a powerful health communication tool. Experiences of postnatal psychosis have been portrayed on television, increasing public awareness, helping to reduce stigma and normalising experiences of the condition (133). Radio and video drama have also been used in South Asia to train community workers about the importance of providing maternal and newborn care (134). In the UK, Lime, an arts in health charity, created a highly effective publication 'Saggy Boobs and Other Breastfeeding Myths' to explore commonly held beliefs and misconceptions around breastfeeding through colourful illustrations and embroidery (135).

Comics have helped to educate parents about developmental milestones through stories, including increasing knowledge amongst relatives and friends (136). As well as this, providing first-time mothers with free books during their first year of parenthood can promote positive beliefs about the value of reading (137).

“ Music can support breast milk production, including increasing the fat content of expressed milk

Reading stories have supported new parents in feeling closer to their babies too, for example in intensive care where reading has enhanced intimacy and sense of control (138), during a baby's first year when it has promoted the development of language, and throughout early childhood when benefits have been found in relation to communication skills (139,140).

Visual arts and dance

Pilot research bringing together creative activities including visual arts and creative journaling have supported new mothers with a history of mild to moderate health problems through sharing thoughts, feelings and experiences in a group environment thereby improving wellbeing (141). Similarly, women taking part in participatory art workshops employing visual methods in the north of England as part of The Birth Project have been able to explore experiences of childbirth and adjusting to motherhood, improving mental wellbeing by 37% (142,143). Observed changes in behaviour after participating in dance-based interventions for young children have indicated accelerated learning in early years, including both physical and cognitive advancement (144).

Movement is essential for a baby's development. Physical coordination precedes cognitive coordination. So, cross-lateral patterns of movement like crawling stimulate complex brain and nervous system development and integration by encouraging different parts of the brain to connect and speak to each other. Movement and crawling are also important for visual development. Physical activity in a safe space can provide endless stimulation for babies to learn about the world around them and young children's experimentation with movements is linked to what we later recognise as 'dance'. Dance expresses feelings, tells stories, demonstrates strength and power, connects people, creates ritual and celebration and, like art and music, it communicates individual and collective experience in a way that words sometimes can't (145).

Visual arts can also enhance healthcare environments. Using art within the design of a Spanish children's hospital, including areas for newborns, has supported humanizing the hospital environment, improving the experience of being in hospital and children's emotional state (146).

“ Participatory art workshops exploring experiences of childbirth and adjusting to motherhood have improved mental wellbeing by 37% ”

Case studies

Music and Motherhood

The two-year Music and Motherhood research project at the Royal College of Music in London (2015-2017) found that 10-week singing classes for new mums and their babies significantly improved PND symptoms when compared to usual care (147). Drawing on this research, Breathe Arts Health Research developed Melodies for Mums, providing free weekly singing sessions using culturally diverse songs to encourage mother-infant bonding and social engagement. A trained music leader and a coordinator lead two hour sessions, over 10 weeks with 14 women in each session. Comments from participants include; “a wonderfully uplifting experience for my baby and me” and “a fun and relaxed way to bond with my baby”.

BLUSH

The BLUSH project was developed in response to the high prevalence of speech, language and communication delays in young children. It is a partnership between St Helens Paediatric Speech and Language Service and St Helens Schools Library Service which provides resources to early years staff and primary school teachers via BLUSH boxes. The resources help assess a child’s level of language and support the development of language and communication skills. These boxes contain specially selected, accessible and age appropriate books and question templates. They are supported with associated training. Feedback from teachers demonstrates that BLUSH has helped them to support young children and understand language complexity.

Trim Tots CIC

Trim Tots CIC was formed to tackle childhood obesity through creative education and play. Their Planet Munch Healthy Lifestyle Programme runs over 24 weeks and supports children and adults to learn together. In this programme children meet, ‘beatboxing greens, hula hooping fruit and the colourful patrons at the Pulse Dance Studio and the Five-a Day Jazz Club.’ Planet Munch features life-sized puppets and interactive music and movement sessions. Participants are invited to ‘dance with Chick Pea and Groove in the Roots with Cousin Carrot’. Planet Munch is described as ‘a delicious blend of energetic playful music, hands on creative craft and inventive storytelling with a healthy message of balanced nutrition at its core.’ Planet Munch is the only healthy lifestyle programme for pre-school children in the UK that meets all the NICE guidelines for prevention and treatment of obesity with evidence to show it is effective at reducing obesity risk up to two years after taking part.



Children and young people



What are the key challenges?

Social problems

Socio-economic, environmental and societal issues can and do have a major impact on the health and wellbeing of children and young people; in particular, poverty, insecurity, living in low income households and inadequate access to health resources can exacerbate health inequalities, psychosocial stress and reduce caregivers' ability to provide support (148,149). Poor children are more likely to develop chronic illnesses, acquire injuries and experience impaired growth, and have greater problems accessing healthcare provision (150).

Children in homes of violence – such as where there is abuse or domestic violence – and those in social care are more likely to have health problems too (151,152). For those in care, many have suffered from maltreatment and are more likely to be diagnosed with emotional or behavioural problems and have lower levels of educational attainment, with 45% diagnosed with a mental disorder (152–154). Provision of social support impacts upon health, with low levels of support and lack of community engagement associated with the occurrence of mental disorders (155).

“ Children in care are more likely to be diagnosed with emotional problems, with 45% diagnosed with a mental disorder

Behavioural problems

Behavioural issues are understood as one of the top three risk factors for the burden of disease and are associated with 200+ chronic and acute diseases. Alcohol use is a global problem. Its prevalence and associated problems seen amongst young people account for 14.5% of deaths in those aged 15–34 in the EU region (156–159). Substance abuse also increases further risk-taking behaviours, including unsafe sex, potentially leading to sexually-transmitted infections and early pregnancy/childbirth which is the leading cause of death in 15–19 year old girls globally (160). Tobacco and cannabis use is also widespread, with 5.6% of 15–16 year olds having used cannabis at least once (160).

Disordered eating and unhealthy eating behaviours are common amongst young people; in the UK, 9.5% of those aged 4–5 and 20.1% of those aged 10–12 are obese, and the average age for anorexia and bulimia onset is between 16–17 and 18–19 respectively (161,162). Many health behaviours that lead to adult death also begin in the adolescent period (148).

Mental health

16% of the global burden of mental health is accounted for by those aged 10–19, with 1 in 8 (12.8%) of those aged 5–19 having at least one mental disorder and half of all mental health conditions beginning by age 14 (160,163).

10–20% of adolescents experience mental health conditions and up to 20% have a disabling mental illness, with suicide considered the third leading cause of death in young people (164). It is important to note that the Personal Social Services Research Unit (PSSRU) points out mental health issues are more likely to be missed in young people than in any other age-group and existing mental health issues often become more complex during adolescence. They add young people aged 16 to 25 with mental health issues are significantly more likely not to be in employment, education or training (NEET) than those without such issues (27% vs 16%). This has economic consequences for those young people and for society.

“ 16% of the global burden of mental health is accounted for by those aged 10-19, with half of all mental health conditions beginning by 14

In England, emotional disorders are the most common type of mental disorder affecting 8.1% of 5-19 year olds, and hyperactivity disorders (inattention, impulsivity, and hyperactivity) affecting around 1.6% (155). The likelihood of having a mental health disorder also increases with age (163).

Attention deficit hyperactivity disorder (ADHD) is one of the more prevalent forms of neurobehavioral disorders that may be diagnosed in childhood. ADHD is characteristically comprised of three main 'pervasive and impairing' components: inattentiveness, hyperactivity and impulsiveness (165).

According to the Good Childhood Report (2018) 22% of young girls self-harm in the UK. The report also shows that having an awareness of gender stereotypes (for children of all genders) has a negative impact on happiness. Children aged 14 attracted to the same or both genders are reported as significantly less happy, and more likely to have depressive symptoms, than children attracted to the opposite gender (166).

What are the costs?

Independent research carried out on behalf of the NHS Confederation's Mental Health Network, by the Personal Social Services Research Unit (PSSRU), at the London School of Economics and Political Science into UK and international evidence (2016) on youth mental health issues and their treatment; found extraordinarily little research on economic aspects of mental health issues or on services for young people in the UK or elsewhere. However, they did identify clear evidence of substantial unmet need for services for young people with mental health problems – a 'treatment gap'. PSSRU concluded; 'To neglect mental illness in young people is not only morally unacceptable, but also an enormous economic mistake.' (p. 7)

Prescription Cost Analysis alone in England showed that in the span of a year (February 2012 to January 2013) in general practice the cumulative bill for mainstream pharmaceutical treatments for ADHD in children and young people was over £33 million (167).

In America, research has shown that the medical costs for a child with ADHD is more than double than those without ADHD (\$4,306 vs \$1,944.00 over a 9-year period) (168).

What can provision of the arts do?

Music

Music can support mental health in children and young people through reducing anxiety, depression, withdrawal and emotional alienation in addition to improving positive psychological factors such as self-expression and personal empowerment (169-171). Music can improve self-confidence and self-esteem in children with previous experiences of sexual abuse (172), improve quality of life for mentally ill children and adolescents (173) and reduce anxiety in children with autism (171).

“ Music can reduce epileptic seizures in children with Rett Syndrome, a genetic brain disorder

Music can provide social support and prompt behavioural changes as well. In low-income children, group drumming can improve socio-emotional behaviours through enhancing social skills, and music therapy can promote communication and improve academic competence (174,175). Music has been shown to be a particularly suitable intervention for children with autism, improving social skills and social adaptability (176). In addition, arts programmes including drumming have positively impacted upon cultural appreciation, gang-related attitudes, health awareness, exercise, and nutrition (169,177).

Music based activities can improve language, communication and social interaction as well as decrease epileptic seizures in children with the genetic brain disorder Rett Syndrome (RTT), reduce aggression in teenagers who are visually impaired and improve literacy skills in children with dyslexia (178–180). Not surprisingly parents or carers of those with RTT are often anxious about on-going health and developmental issues. Music in this instance has also been found to have clear benefits for the parents/carers of children with RTT in relation to reductions in their own levels of stress (178).

Singing can communicate tooth brushing instructions to visually impaired children, helping them to remember brushing sequences, thereby improving oral health (181).

Storytelling and media

Storytelling and media interventions are particularly powerful as health communication tools as they can target messages to particular audiences and use narratives to frame messaging (182). In low- and middle-income countries, mass media interventions (including radio, television, newspapers) have been used to positively impact upon child survival through encouraging behaviours such as tuberculosis testing, handwashing, consumption of vitamin-rich foods, and use of contraceptives (183). Storytelling strategies can also increase children's awareness of personal hygiene (184), provide evidence-based vaccine information to parents (185), and promote fruit consumption in secondary school children (186).

Storytelling can change behaviours in young people, such as reducing alcohol and marijuana use (187), and changing unsafe sexual behaviours (188). One powerful health communication tool has been a TV Series called 'East Los High' which has crafted stories in partnership with health bodies to encourage young Latino Americans to make healthy life choices: 86% were more likely to adopt emergency contraception, and 93% said they were likely to recommend emergency contraception to someone they knew as a result of engaging with the programme (189).

Drawing

Drawing is a powerful mode of expression. It can be used to explore emotions and improve quality of life in hospitalised children (190), support children in communicating their experiences of having cancer (191) and increase the richness of statements provided in investigative interviews with children who have experienced sexual abuse (192). Drawing can also reduce stress in children undergoing dental treatment (193), and calligraphy can reduce hyperarousal and stress hormone levels in children who have experienced trauma (194).

Performing arts

Circus arts can positively influence mental wellbeing, aid in the development of social skills and build resilience to adversity (195). Drama can improve wellbeing and reduce exposure to violence among urban youth (196), as well as improve self-esteem (197) healthy eating attitudes (198,199) and awareness of the dangers of substance abuse (200–202). Improving balance, gait and walking, dance and movement interventions can also support children with cerebral palsy (203).

Other creative activities

Combined arts approaches and novel interventions have been powerful in supporting children and young people. Delivered by Breathe Arts Health Research, magic tricks have been used to develop hand and arm function, cognitive abilities, self-confidence and independence in children with hemiplegia (paralysis of one side of the body), with a child's affected hand used 25% in bimanual activities before a 2-week magic programme and used 93% following it (204).

Interactive video games have been developed specifically for cancer patients to improve attitudes towards chemotherapy (205), digital games and apps have been used prior to surgery to engage and distract children (206,207), and creative gaming has supported young children to feel more informed and less frightened about having their blood taken (208).

“ Magic tricks can improve hand function in children with hemiplegia, increasing the use of an affected hand from 25% to 93% in bimanual activities

Case studies

Kinlochlovin'

Kinlochlovin' is a social enterprise and charity that provides young people with access to creative workshops designed to promote health and wellbeing, social inclusion and social justice. Aiming to provide support with the development of self-sufficiency and independence, the organisation provides the tools for young people to develop skills to become effective contributors in their own communities. The workshops are free and take place weekly.

Theatre Peckham

Theatre Peckham is funded by the Mayor of London's £45 million Young Londoners Fund. They use theatre classes to improve the confidence, mental wellbeing, resilience and communication skills of disadvantaged children in their local community. Collaborating with local primary schools and community organisations, the project contributes to the theatre's wider education and community engagement offer.

Live Music Now

Live Music Now (LMN) is a national charity which provides tailored music activities for children and young people whose access to live music is often limited due to specific needs or disadvantage. They recruit and train musicians to deliver hundreds of performances and workshops throughout the UK, bringing joy and inspiration to thousands of children and young people. For many of these children, it is often their first experience of live music. During the Covid-19 lockdown much of LMN's work moved online with the establishment of a free music video library with inclusive musical activities devised by LMN musicians, inspired by their visits to special schools across the UK.



Glossary

ADHD - Attention deficit hyperactivity disorder. A behavioural disorder associated with symptoms of hyperactivity and/or inattentiveness.

Cardiorespiratory - Referring to both the cardiac/circulatory and respiratory systems. In the case of collecting data to measure cardiorespiratory stability, this could include simultaneously measuring heart rate, oxygen saturation and respiratory rate.

Cohort study - A longitudinal study which tracks a particular group of people over a long period of time to explore associations between different variables and outcomes normally difficult to examine within an experimental study. Cohort studies are particularly useful within arts and health research to explore the preventative potential of arts engagement, such as understanding whether the arts can reduce the likelihood of developing certain health conditions.

Cortisol - A stress hormone. When discussed in relation to arts interventions, it is normally the case that researchers seek to explore whether the arts can reduce cortisol in the body as high levels of cortisol can be associated with negative health conditions or poor health such as chronic stress, high blood pressure or fatigue.

Delusions - A strong belief in something that seems unlikely to be true.

Emotional disorders - Usually referring to mood disorders such as major depressive disorder, social anxiety disorder (social phobia), generalised anxiety disorder (GAD), panic disorder and bipolar, to name a few examples.

Evolutionary adaptation (human) - The ability of humans to biologically adapt to changing environments, improving chances of survival.

Generalized anxiety disorder - A long-term condition characterised by feelings of anxiety such as unease, restlessness and worry.

Gray matter - Tissue of the brain and spinal cord that has a brownish-grey colour and consists mainly of nerve-cell bodies and nerve fibres.

Hallucinations - Seeing, feeling or experiencing something that only exists in the mind, such as having visions or hearing voices.

Hyperarousal - Being on high alert, normally in response to trauma, with symptoms such as hypervigilance, overstimulation, racing thoughts and problems sleeping. Also associated with the 'fight-or-flight response', with high alert viewed as a physiological outcome of being faced with a situation of threat.

Insecurely attached - Characterised by three of the four styles of attachment put forward in Attachment Theory (ambivalent, avoidant, and disorganised attachment). Also viewed in contrast to secure attachment, with those who are securely attached considered to be better able to create and maintain successful relationships.

Intervention - A 'medical intervention' to intervene with the progression of illness, disease or any form of medical condition, or to support preventing the development of such conditions. Over the last 20 years in particular, there has been a burgeoning interest in how arts interventions can play an important role in healthcare, including how the arts are beneficial to health promotion and prevention, and how they can support management and treatment of a range of different health conditions (209).

Mammary hypoplasia - When a new mother is incapable of producing a sufficient volume of milk for their new baby.

Neonatal - Referring to the period of a newborn's life in the first month immediately following birth.

Neurodevelopmental deficits - impairments in the growth and development of the brain and/or central nervous system that can lead to disorders affecting emotion, learning, memory or behaviours.

NICU – Newborn Intensive Care Unit. Usually found within a hospital and tending to be for babies born early or with health complications who need extra monitoring.

Obese – Someone who is considered very overweight. The NHS in the UK has identified obesity as a ‘common problem’ that affects around 1 in every 5 children aged 10–11 (210).

Obsessive-compulsive disorder – A mental health condition characterised by recurrent thoughts and compulsive behaviours which are difficult to stop.

Oxygen saturation – the fraction of oxygen-saturated haemoglobin (a red protein responsible for transporting oxygen in the blood) relative to total haemoglobin in the blood.

Polycystic ovary syndrome – A condition caused by a hormonal imbalance due to enlarged ovaries containing fluid-filled sacs. There are a range of different symptoms associated with the condition which are not experienced by everyone who has it; these may include irregular periods, problems getting pregnant, extra hair growth and weight gain, as well as changes to mood.

Pre-eclampsia – Pregnancy-induced hypertension (high blood pressure), in addition to protein found in the pregnant woman’s urine (proteinuria). Most common in the later stages of pregnancy.

Preterm – Babies born before a pregnant woman reaches full term (37–40 weeks); also known as ‘premature’ birth.

Psychosocial – Denoting both psychological and social features, and how they are interlinked. Often used within the field of arts and health in relation to interventions i.e. ‘psychosocial intervention’ to denote how an arts intervention can impact upon both psychological factors such as mood and wellbeing, as well as social factors such as social support and social cohesion, as well as acknowledging how these factors are interrelated to one another. Other common uses include ‘psychosocial support’, ‘psychosocial wellbeing’ and ‘psychosocial stress’. In the case of the latter, psychological symptoms of stress (such as poor mental health) are thought to be connected to social factors, such as relationships.

Rett Syndrome – A rare genetic disorder affecting the physical and mental health of primarily young female children (around 1 in 12,000 girls born each year); symptoms include mobility problems, slowing of head growth, irritability, distress and social withdrawal (211).

Risk factors – Factors, such as individual behaviours or harmful environments, that are thought to increase the chances of developing a health condition. Also referred to as ‘determinants’ of conditions.

Social adaptability – The ability to fit in with one’s social circle and social environment.

Social-emotional – The social processes (such as the behaviours of others) which enable one to develop the capacity to manage emotional health. Often used in relation to ‘social-emotional development’, ‘social-emotional skills’ or ‘social-emotional competency’.

Socio-economic – Relating to the combination of social processes and economic factors, commonly associated with the idea that social status influences economic attainment; for example, exploring how class background affects earnings.

Stress hormones – Hormones released in the body in response to stress, such as cortisol and norepinephrine, with high levels associated with adverse effects. Within arts and health, there has been a growing interest in understanding whether measuring stress hormones (such as cortisol) before and after arts engagement can support an understanding of whether arts interventions can reduce stress, thereby improving mental health and wellbeing.

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