

# Evaluating Sistema Scotland

A narrative synthesis of evidence relating to the impact of arts and community-based arts interventions on health, wellbeing and educational attainment (Systematic literature reviews, Work Packages 1, 2 and 3)

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This report has been commissioned by the Glasgow Centre for Population Health (GCPH), and the findings and views expressed herein do not necessarily represent those of the GCPH or its partners.

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## Foreword

*“Art is an irreplaceable way of understanding and expressing the world. There are some truths about life that can be expressed only as stories, or songs, or images. Art delights, instructs, consoles. It educates our emotion.”*

These words from American poet Dana Gioia (2007) describe the unique and emotive qualities of art in expressing and sharing human narratives and experiences. In recent years the arts have been utilised as a vehicle for delivering social regeneration – to strengthen communities, to address damaging social behaviours and to enhance social capital and employability. All of which has the potential to improve the health and wellbeing of the community members involved. With the arts being used in this way within communities, funding bodies are applying greater scrutiny to assess the impacts of such investment.

Sistema Scotland is one such organisation using the arts as a vehicle for social betterment. Sistema is on a mission to transform lives through music. Through its ‘Big Noise’ programme Sistema Scotland believes that children from disadvantaged backgrounds can gain significant social benefits by playing in a symphony orchestra. The Glasgow Centre for Population Health (GCPH) is now working with Sistema Scotland and is leading the evaluation of the Big Noise programme in Raploch, Stirling and in Govanhill, Glasgow.

The need to better understand the potential role the arts can play in social regeneration and in improving health and reducing inequalities is especially important given that the major burdens to health in Scotland are diseases of a ‘socio-behavioural’ origin such as heart disease, obesity, depression, anxiety, alcoholism and drug misuse. These ‘social’ diseases exert a disproportionate grip on Scotland’s disadvantaged communities and are perpetuated by damaging social behaviours and coping mechanisms, addiction, overconsumption and social exclusion.

Through the evaluation of Sistema Scotland the GCPH is committed to generating evidence and providing leadership as to the role the arts can play in regeneration, grassroots positive social change and in improving the health and wellbeing of disadvantaged communities. The GCPH places value on all forms of ‘evidence’ across our work themes. This is especially appropriate when researching the arts; which are a diverse, multidimensional, experiential and emotionally-driven phenomenon. Indeed the evaluation of Sistema Scotland will capture a range of evidence from a variety of sources. The approach will include qualitative research with children and families as well as longitudinal analyses of social, health and economic quantitative outcomes using a control design.

An important first step in the evaluation process is to assess the current evidence concerning the arts and health. With a particular focus on the evidence required to inform the evaluation of Sistema, three distinct systematic literature review work packages were commissioned:

- WP1: The impact of art attendance and participation on health and wellbeing

- WP2: ‘Arts and smarts’ – assessing the impact of arts participation on academic performance during the school years
- WP3: Community-based music programmes, and health and inequalities – the impact on children/adolescents and their families

The commissioned systematic reviews assess the quality of evidence in each work package using a traditional view of the evidence hierarchy. This does mean a disciplined and restrictive view of evidence, but this approach is helpful at the outset of the evaluation in order to highlight studies which have yielded high-quality findings and significant results. Equally valuable is the consideration of the theorised pathways between the arts and health, and potential mechanisms of change - as well as highlighting gaps in evidence across the three work packages. The systematic reviews consider evidence over a ten-year period from 2004 to 2014 and thus provide an overview of recent evidence, methodologies and commentary. This paper is a narrative synthesis of the findings from the three systematic reviews and draws out implications for the role of the arts in society and for the design and delivery of arts programmes as social interventions.

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## 1. Introduction

The purpose of this report is to synthesise and highlight key aspects of the three literature reviews within each work package (WP). Please note that the highlights included here are based on the interpretation of the most important aspects and are not necessarily based on weight of evidence or frequency of appearance in the reviewed literature. Therefore, some of the highlighted aspects might have come from several studies and the other from a couple of studies. For exact details behind this narrative synthesis, please read the full reports of WPs 1, 2 and 3.

WPs 1 and 2 reviewed papers related to all art forms, whereas WP3 focussed on music. The research questions can be seen in Table 1.

Table 1: Review Questions for WPs

WP1	WP2	WP3
1. What is the impact of participation in arts on health and wellbeing?	1. What is the impact of participation in arts on academic achievement?	1. What do we know about the relationship between music participation and health and wellbeing in children and young people?
2. What is the impact of arts attendance on health and wellbeing?	2. What is the impact of arts attendance on academic achievement?	2. What theories and theoretical foundations are used in the empirical publications linking music engagement/participation with health and wellbeing in children and young people?
3. Which theories, if any, underpin the research on arts and health and wellbeing?	3. What is the impact of participation in arts on health and wellbeing of school aged children?	3. What specific population groups, settings and outcomes have been considered?
4. What outcome measures have been used in the studies examining the impact of arts on health and wellbeing?	4. What is the impact of arts attendance on health and wellbeing of school aged children?	4. What study designs and methodological approaches have been used?
	5. What are the differences in impact, if any, based on the child's gender, age, SES, ethnicity?	5. How strong (what is the evidence) is the evidence base linking music participation to health and wellbeing in children and

		young people?
	6. Which theories, if any, underpin the research on arts and academic achievement?	6. What do we know about music and its role in addressing social and health related inequalities in children and young people?
	7. What outcome measures have been used in the studies examining the impact of arts on academic achievement?	7. What are the gaps in the current state-of-the science linking music with health and wellbeing of children and young people, including theoretical, methodological and implementation?

Note: Colours depict overlap of research question although age and context might be different.

The relationship between WPs and focus based on research questions can also be seen from Figure 1.

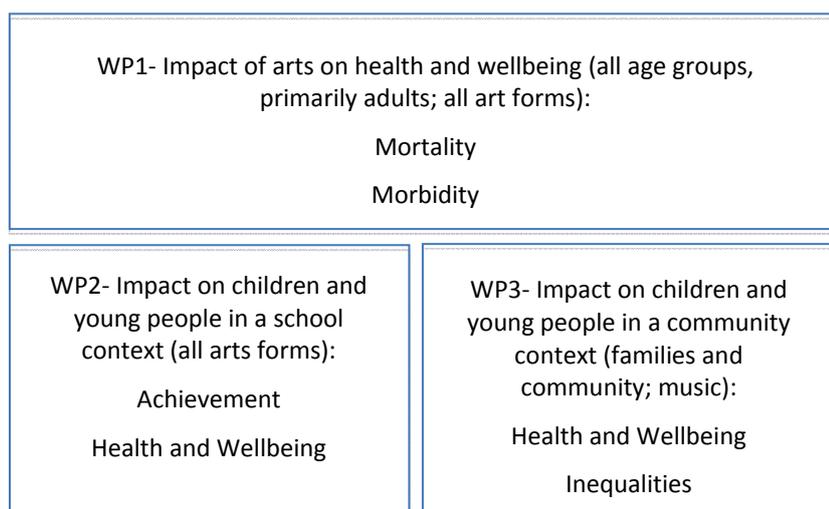


Figure 1: Overview of the work packages

As can be seen from Figure 1, there were substantial differences in the three literature reviews therefore a direct synthesis is difficult. However, an attempt has been made to synthesise within these limitations and these should be borne in mind when reading this report.

## 2. Methodology

All three literature reviews followed the seven main steps of the EPPI-centre approach, and started off with a review of previous literature reviews in the identified areas. Databases in different WPs included medical, educational and social science databases, namely MedLine, ERIC, ASSIA, Web of Knowledge, CINAHL, SCOPUS, PsychInfo, BEI and AEI. After rigorous scoping, screening and quality assurance, WP1 was based on 25 research papers, WP2 on 31 and WP3 on 8. All these studies included empirical data, mostly primary data and some secondary longitudinal datasets. Research in these fields was variable in quality that led to WP1 being based on robust quantitative studies; WP2 on a mix of quantitative and qualitative studies with a range of robustness; WP3 primarily qualitative, with only one using experimental design, and overall lesser methodological robustness.

## 3. Results

Some areas such as health and wellbeing were a common focus for all three WPs. However, others like school achievement were limited to WP2 and inequalities to WP3. Results have been presented under the main areas coming from at least one of the work packages. *A note of caution: as mentioned earlier, there is great variability in the robustness of research methodology in studies reviewed within and across the three WPs, so all findings, especially those that are synthesised across the WPs, should be read with that in mind.*

### 3.1 Impact of Participation on Health

From papers reviewed in WP1, it can be said that participation in arts (drumming, choirs, dance) had positive impact on physical health and wellbeing. The evidence of the preventive health benefits of dance was compelling and conclusive. Arts, as a distinct form of a leisure activity, led to an increase in the levels of general daily activity, which in turn had a positive effect on physical wellbeing. Papers included and reviewed in WPs 2 and 3 did not make reference to physical health and wellbeing.

### 3.2 Impact of Participation on Social and Emotional Wellbeing

All three WPs provided evidence of the impact of participation in arts on wellbeing, however there was variability in the evidence base due to differences in robustness of the studies. Several studies also reported the positive impact on, what can be seen as, indicators or components of wellbeing such as mood, quality of life, enjoyment, self-esteem, self-worth, self-confidence, social interaction, motivation, empowerment and voice, and resilience. All arts forms, for all age groups, seem to have a positive impact. Particular examples from WP1 show the impact of participation in creative writing on reducing depressive symptoms in older adults with a clinically significant level of depressive symptoms. There were also

examples of an impact on quality of life of the elderly. WP3 reported on the impact of group drumming for inner-city youth in a juvenile detention centre and found statistically significant improvements in self-reported depression compared to participants of a control group.

### **3.3 Impact of Participation on Achievement**

This was the main focus of WP2, although a couple of studies in other WPs also referred to the impact on achievement in a school context. The strongest evidence of positive impact came from two pre-school studies, whereas the robustness of evidence was more variable across primary and secondary school age groups. In general it can be said that there was an increase in achievement of children and young people participating in arts, however the causal relationship is more difficult to establish. Two of the 31 studies reported that they found no evidence of impact. Several academic-related impacts were also documented, such as improvements in vocabulary, memory, listening skills, motivation to learn, etc.

### **3.4 Impact of Participation on Social Relationships and Social Cohesion (peers, families and communities)**

All three WPs found studies that reported on the positive impact of participation in arts on social relations, social cohesion and decrease in isolation, irrespective of age and context. Participation in arts provided opportunities for people to come and work together in groups. There were examples of team building; increased social interaction; improved support systems; community development; bonding between child and family, with peers and intergenerational group bonding. Some studies in particular focussed on social cohesion and inclusion of refugees and 'youth at risk' and reported positive impact (WP3).

### **3.5 Impact of Participation on Achievement of children and young people from low SES**

From the studies included in WP2, there was mixed evidence of impact on achievement of children from low SES. Three found that children from low SES achieved more due to participation in arts, two found that achievement improved for both low and high SES groups, and one indicated that overall achievement was higher for children from high SES.

### **3.6 Impact on Social and Health Inequalities**

WP3 focussed on this aspect and found only one paper that explicitly referred to this. It highlighted that existing social capital might play a major role in whether social and health inequalities can be reduced. Some studies implicitly looked at aspects of inequalities. Although there was optimism at individual level (see also WP2 SES and achievement), it was not clear how arts could lead to a structural level change to reduce inequalities in communities.

### 3.7 Impact of Good Quality Arts Programmes

Some studies highlighted that better the quality of arts programmes, the larger the effect. However, it was not clear what ‘good quality’ entailed or from whose point of view.

### 3.8 Impact of Intensity and Duration of the Arts Programmes

Some studies reported that the more intense and longer the duration of arts participation, the greater was the impact on achievement, and health and wellbeing. For example, one study found that a 12-month programme was more effective than a 6-month programme. However, the optimum duration and intensity were not reported.

### 3.9 Impact of Attendance on Achievement, and Health and Wellbeing

Limited studies focussed on attendance in comparison to those that focussed on participation in arts. Attendance was however seen to have a positive impact on achievement, and health and wellbeing. The frequency of attendance was varied in the studies, with impact seen from three visits per year to the theatre to greater frequency of attendance being linked to more impact in others. Listening to music was found to have a positive impact on children and adults; however one study did find that background music had a distracting effect on female pupils in test conditions. One study reported that the higher the congruence between child’s and parent’s listening preferences of music, the higher the levels of positive impact on emotional wellbeing. Arts and cultural attendance was found to reduce depressive symptoms and improve emotional wellbeing. More specifically, attendance at certain kinds of cultural events may have a beneficial effect on longevity, predicting survival and reducing mortality rates among non-clinical samples. The results implied that promoting cultural attendance could lead to improved population health.

### 3.10 Pathways

Some studies specifically reported on positive pathways as a result of participation in arts. According to one study, participation in arts led to an increase in the levels of general daily activity, which in turn was seen to have a positive effect on physical wellbeing. One study reported that due to participation in arts, children were better prepared to start school. Another study based on an analysis of a secondary longitudinal dataset, reported an impact on Higher Grade Point Averages, and increased uptake and better outcomes in further education. One study highlighted that music engagement *may* help at risk youth to develop transferable life skills that may help them to *leave* a pathway into crime and thus moving towards positive pathways. Some pathways were visible due to the longitudinal nature of the study; others were more aspirational. However, even with the visible ones, the causal relationship was not certain.

### **3.11 Outcomes and Outcome Measures**

A number of outcomes related to the objectives of the studies were used, with some finding concurrent outcomes. Some of these were, for example, creative and arts-related skills, developmental numeracy, language, anxiety, depression, community and public engagement, and physical fitness.

Outcome measures included researcher-designed measures, standardised measures and national level tests (in the case of WP2). Examples include Basic Psychological Needs Scale, Rosenberg's Self-Esteem Scale, Child Temperament and Personality scale, Grade Point Average/School Report Cards, etc.

### **3.12 Theoretical Underpinning**

Only a few studies explicitly mentioned the theories underpinning the arts initiative (e.g., Social Capital Theory, Social Cognitive Theory), research (e.g., Buffer Model of Leisure and Health, Flow Theory) or the research approach (Grounded Theory Approach, Constructionism). This area seems to be under-theorised in general.

## **4. Discussion and Conclusion**

### **4.1 Methodological Critique of Studies Reviewed**

It is important to acknowledge that the studies reviewed across the three WPs were undertaken for a wide variety of reasons and were methodologically very different. The lens we have applied here in critiquing the studies has been influenced by our aim to undertake systematic and rigorous literature reviews based on specific criteria to find evidence of impact. This might not have been the intention of the authors whose work has been included here or indeed the criteria applied by them when looking at role, impact or effect of arts.

As mentioned earlier, despite several studies claiming evidence of 'significant' impact, there was a great variance in the quality and robustness of evidence across the three WPs. This is reflected in the analysis of the weight of evidence of the papers included in the reviews. For example, although WP1 could include 25 large, quantitative studies with more robust research designs; the 31 studies in WP2 were variable in evidence base, and rigour had to be seen in the specific context of what each study had set out to do; WP3 had to include eight studies that were small scale and could not provide robust evidence. Several factors impinged on the robustness of the evidence (different factors existed in each study), such as small sample size; low number of longitudinal studies; limited studies with designs involving baseline before and/or delayed follow up after the completion of the arts programme; small number with comparison groups; presence of several uncontrolled variables; lack of clarity of

causal relationship; lack of objective measures; and mix of arts forms experienced by the individual (sometimes along with sports and other co-curricular activity).

## **4.2 Limitations of the Literature Reviews (WPs 1, 2 and 3)**

Due to the inclusion and exclusion criteria (e.g., time period of 2004-2014, English language publications), key terms, databases, it is possible that some useful and high quality studies have been missed that could have provided further evidence to support or refute the findings of the three literature reviews. However, every effort was made to avoid this through quality assurance and sharing of papers between and across the three WP teams.

## **4.3 Implications for Future Research**

### **4.3.1 Areas for future research**

There are several gaps in this area that would benefit from further research. These include:

- Health and wellbeing need to be conceptualised better in future research.
- Limited studies have looked at the differential impact of participation in arts on the male and female participants. The findings were inconclusive in WP2, whereas WP1 found evidence of more impact on female in later life. The role of gender and specific needs based on gender should be explored further.
- Findings related to SES were varied and further exploration in different contexts, e.g., school-based and community-based arts programmes, is required.
- Although WP1 found evidence of impact in later life, most studies in other WPs did not explore the impact based on age of participant. Future research might want to explore any difference in impact based on age.
- Research evidence related to impact on Health and Social Inequalities was scant and needs further exploration.
- Impact of any initiative without an exploration of pathways is incomplete. Future research, essentially longitudinal, is required to establish long-term impact and pathways of positive change. Application and specific evaluation of theory will assist in development of pathways and mechanisms of action of the interventions.
- Interestingly, although arts initiatives focussed on expression and resilience, the research designs did not emphasise meaningful ways of listening to voices of people, such as children. Future research needs to explore the use of creative approaches to listening to the voices of participants in research.
- A limited number of studies investigated the generalisation of the impact of arts to other contexts and domains. For arts initiatives to be meaningful, studies should specifically investigate whether the impact has generalised for example from school to home, or community based arts to school achievement.

- Again, a limited number of studies were longitudinal and even fewer included a baseline or follow up. Future research should explore whether the impact of arts is maintained over time and to what level.
- As mentioned earlier, good quality, intensive and long duration arts programme were seen to be the most effective. More research is required to understand what these are and what they might mean for different age groups and contexts.
- Researchers should also consider negative impact, if any, of participant in arts initiatives, especially by gathering evidence from those who decide to stop participating. It is also important to ascertain reasons for those individuals who leave the initiatives and what can be done to sustain meaningful participation.

#### 4.3.2 Methodological Considerations

If the purpose of research in this area is to establish *robust evidence of impact* of arts participation and attendance, robust research in this area should include the following aspects:

- employ source and methodological triangulation, to obtain multiple perspectives and to collect data through mixed methods design,
- use objective measures, but be mindful that in some areas such as social and emotional wellbeing the subjective measures might be appropriate,
- try to establish cause-effect,
- control for, or take account of, confounding variables, either through a similar characteristics comparison group or controlling variables during analysis,
- adopt longitudinal designs to capture longer-term impact,
- build in a baseline and follow up phase, to see actual change and its maintenance,
- ascertain generalisation of impact in other contexts and with other people.

#### 4.4 Implications for Policy and Practice

- Provide excellent quality arts programmes with appropriate funding. Good collaboration between practitioners, participants and other stakeholders is required to decide on what might constitute a good quality programme.
- Ensure accessibility of arts programmes for people from low SES with the purpose of making individual level and structural changes.
- Provide arts programmes and activities for a longer period of time. However, optimum duration and intensity needs to be researched further.
- Make explicit any theory underpinning arts practice and research, as well as making explicit any emerging theories from the work.
- Ensure greater collaboration between arts practitioners and researchers to facilitate a research minded practice from the start especially in community-based arts initiatives.