MUSICS, SELVES AND SOCIETIES: THE ROLES OF MUSIC IN EFFECTING CHANGE

A workshop at the University of Cambridge
June 25-26, 2018

"It is assumed that music is an art or technique more or less divorced from life… We think of music as no isolated abstract art—a mere element of culture—but as… a form of living, influencing and influenced by every other form of living."

Diserens and Fine (1926:11)

UNIVERSITY OF CAMBRIDGE *sempre:* JOHN TEMPLETON FOUNDATION Centre for Music & Science

Position Paper Abstracts

Music in therapy

Embedding music and music therapy in care pathways for people with dementia in the 21st century

Helen Odell-Miller

Anglia Ruskin University

In the UK and in some other countries, music and music therapy are now indicated as important in national guidelines and policies for people with dementia. However, in practice there is still much to address in order to realise these objectives. The care for people with dementia both at home, in the community and in care homes is an increasing health and social issue as life expectancy is extended. Relatives and carers need to know they can have access to therapies and activities which do not require complex cognitive powers but which focus upon positive non-verbal interaction which is usually possible even in the last stages of dementia. There should be choice access and clear information for people to access music and music therapy, especially where there is now increased evidence of efficacy of their contribution to better health and wellbeing for people with dementia. This paper will provide an overview of the state of the art for music therapy for people with dementia especially in relation to training, interventions and research. It will draw upon community and home based case studies to illustrate recent developments in practice and research.

Music therapy in adult mental health: Evidence, challenges and implications for social policy

Catherine Carr

Queen Mary University of London

Some of the strongest evidence for music therapy is within mental health care: It is recommended in national guidelines for schizophrenia, Cochrane reviews suggest it is effective in reducing symptoms of schizophrenia and depression and clinical theoretical and case study literature spans over 50 years of practice. The 'contemporary' profession formed in the last 50-70 years with the Second World War a pivotal event for this. At this point in time, within medicine, randomised controlled trials came into the foreground, the National Health Service (NHS) was formed and major changes occurred in our understanding and provision of mental health care. From this beginning in a new era of hope and possibility, the changing political/economic climate and healthcare system demanded music therapy increasingly provide evidence to justify both its effectiveness and cost. What began as pioneers documenting their work and developing theory has moved to studies that test effectiveness, seek to measure mechanisms and understand the role that music may play. At times, a lack of evidence and understanding may have led to loss of posts whilst inclusion in national guidelines is seen as a protective factor and a means of justifying ongoing provision. This is not always the case and inclusion in guidelines alone does not help commissioners, multidisciplinary teams and the wider public to understand what music therapy is, why it might be of value and when. This paper will review existing evidence for music therapy in mental health care from a UK perspective, and examine the issues and challenges posed when seeking to provide evidence within a medical and health-care context. Contemporary theories relevant to music therapy in mental health will be explored, leading to suggestions as to how future research and policy may support the development of music therapy and music in health initiatives in mental health care.

Music in education

Being and becoming: Problematizing research on the 'effects of music education' on child development

Beatriz Ilari

University of Southern California

The idea that music education impacts child development is widespread. Several factors, including the dissemination of the so-called 'Mozart Effect' in the early 1990s and, more recently, the emergence of comparative educational data across the globe, along with neuroscientific brain imaging, have fueled the emergence of studies on the potential effects of music education on children's development. Although progress has been made, some issues call for further thinking. I begin the talk by outlining some of the strengths of the studies conducted thus far, with a special attention to longitudinal work conducted in the last decade. Next, I discuss methodological, conceptual, philosophical, and political issues that impact research. Methodological issues of concern include the small number of studies using mixed-methods approaches, the persistent lack of reports from 'non-WEIRD' populations, and the small number of interdisciplinary and intercultural research teams. From a conceptual standpoint, I argue that there is still a tendency to view music education in a monolithic way, despite the expansion and diversification of music programs worldwide. Concerning philosophical issues, I bring up some 'false binaries' that are often implicit in research on the 'effects of music education' including formal/informal learning, being/becoming, and science vs. art; and how they may not only impact research findings, but also potential applications of research into practice. I also bring up the issue of research with children as a political endeavor; how this research may serve both salvationist and neoliberal agendas, using the case of early childhood as an illustration. I conclude the talk with some suggestions as we move forward, including a shift in our conceptualization of children in longitudinal research—from becoming to *being and becoming*—, and with much attention to design studies and produce reports that are not one-sided, but that acknowledge the complexity of music and musical experiences.

Musics, selves and societies: the roles of music in effecting change – a music education perspective

Graham F Welch

University College London

Music education is found in many guises, whether informally in the home, in a community setting such as a community centre or private studio (non-formal context) or in the formal education system. Each of these contexts offers opportunities for the realisation of musical potential at an individual level and, through group membership, for the wider socio-cultural collective. Learning *in* and *through* music is evidenced in many studies, particularly in recent decades where there has been a greater scrutiny on music's relative importance in the school curriculum and also a range of studies exploring the wider benefits of music to social, physical and mental health and wellbeing. Nevertheless, in order for music education provision to be effective it has to be well-matched to the needs of the individual (and the group), which implies an understanding of the nature of human design and development, including how our neuropsychobiological potential are shaped through interaction with our environments.

Music and social development

The orchestra as a model for social transformation

Kathryn Jourdan

Sistema Scotland

The Big Noise programmes in four communities across Scotland provide an illustration of how music-making can effect social change. This paper seeks firstly to give an outline of what happens in the Big Noise centres and how the children, young people and wider community members learn to play instruments within the context of the orchestra. Secondly it aims to give a flavour of the strands of our work from which researchers from the Glasgow Centre for Population Health have drawn out principles of practice in order to inform the work of other organisations. Taking account of the evaluation's conclusion that it is people who change lives, not services, nor programmes, nor even music, this paper begins to ask the question, 'Why music-making?'; Are there qualities inherent in the activity of making music together that seem to enable a transformational flourishing amongst participants in the Big Noise?

Perspectives drawn from conversations with members of Big Noise Raploch's Youth Board reveal some penetrating observations concerning the personal and agential effects of playing music within the orchestral context. These fresh perspectives might require a reorienting of thinking for instance about the effects of 'the discipline of orchestral playing' and an examination of the agential affordances of instrumental music's abstract qualities and complexities.

The potential of music to effect social change

Tal-Chen Rabinowitch

University of Haifa

Can music effect social change? This is a rather complicated question, because both music and social change are complex entities that exist in multiple forms and within diverse contexts. What types of music cause social change and what kind of social change is generated by music are open questions that deserve systematic empirical investigation. Addressing these questions would have important benefits for advancing society and for revealing the foundations of the human connection to music. Several studies have begun to explore these questions, but it would be useful at this stage to pause and consider what is actually meant by social and what are the cognitive and emotional processes that underlie music. Multiple types of social behavior exist (e.g. collaboration, helpfulness, etc.), and occur in different contexts (e.g. dyad, group, community etc.). At the same time, engagement in music comprises a variety of cognitive processes (e.g. synchronization, imitation, movement etc.). In order to better understand how these different musical and social variables interact, and in order to continue to produce high quality research in this area, it will be necessary to adopt robust methodological standards and to carry out more investigations of the mechanistic basis of the links between music and social change. Such a research agenda will include a thorough deconstruction of music into its basic elements and then a reconstruction of the most socially relevant parts into, possibly, a new form of music?

Music in public policy

Musics, selves, societies: the value(s) of music(s)

Ian Cross

University of Cambridge

If music has consistent and unique effects on individuals on social relations and on social structures, we need to engage with political systems that have their own agendas so as to ensure that music is integrated into the development of effective policies. To formulate effective strategies to achieve this we have to identify what types of value we can and should attribute to music. We can characterise the sources of value that we accord to music as aesthetic, cultural, economic, clinical, societal, and cognitive, each type of value requiring different types of evidence to support it, different agences to be addressed in order to realise that value in policy and different types of channels employed to influence each type of agency. While aesthetic and cultural value are the most widely acknowledged types of value associated with music, they also appear to be the least effective, in part because they are outweighed by economic value in influencing policy. Yet other types of value, in particular, clinical, are increasingly supported by evidence and incorporated into policy-making. In addition to clinical value, evidence suggests that music may also possess value in promoting positive educational (cognitive) and social (empathetic) ends, which implies that strategies need to be developed to use that evidence to effect policy changes that recognise such value. I shall conclude by suggesting that the superordinate value of music may be as a component of the human communicative toolkit—in which case all should have the opportunity to have access to its capabilities.

Musics, selves, societies: the value(s) of music(s)

Joe Watt

Department of Culture, Media and Sport

The evolution of public policy can be a slow and frustrating process, particularly when it concerns the cultural arts. From a policy perspective, the arts sit at the intersection of several divisive political issues: identity politics, local government funding, education policy, mental and social care, and many more. When we focus specifically on music, other points of contention emerge: how do we define "music"? How can we convey its value? And is it possible to develop policies that accurately serve the spectrum of musical activity in the United Kingdom?

To better understand the relationship between music and public policy, we might begin by trying to understand policy makers themselves. By unpicking the things that make policy makers tick, we can begin to appreciate the inputs necessary for positive policy change.

Poster Abstracts

Preschool Children's Helping and Sharing Following a Brief Joint Singing Activity: Does the Beat Matter?

Sara Beck & John Rieser

Vanderbilt University

Research has shown that active musical engagement promotes prosocial behavior in preschool-age children under some conditions but not others (Kirschner & Ilari, 2014; Kirschner & Tomasello, 2010). In non-musical contexts, synchronous motor behavior has been shown to increase prosocial behavior in preschoolers (Rabinowitch & Meltzoff, 2017), but naturalistic music making at this age does not typically elicit precise motor synchrony. The current study was designed to examine preschool-age children's helping and sharing behavior toward a previously unfamiliar adult subsequent to a joint singing activity that was either temporally regular or temporally irregular – "jittered." We hoped to answer the question: does asynchronous joint singing produce the same amount of subsequent helping and sharing as more synchronous joint singing? Both conditions (temporally regular joint singing and jittered joint singing) preserved elements of musical engagement (singing, shared goal, gaze directed at a social partner) while removing the predictable temporal structure (or "beat") for half of the participants, making synchrony virtually impossible. The children in the temporally regular condition – though still limited by their own motor capabilities – had the benefit of a beat to aid their singing coordination, and we made the assumption that the beat manipulation would produce more vocal-motor synchrony in the temporally regular condition than in the jittered condition.

Results from a sample of 32 children in the greater Nashville, Tennessee area in the southern United States showed that children's sharing, helping, and engagement (singing participation and gaze directed at a social partner) did not differ between groups. Thus, there was no evidence that the temporal regularity of the interaction influenced children's engagement in the musical interaction or their subsequent prosocial behavior, but singing participation was significantly associated with sharing across conditions (r_s =.375, p =.034). Additionally, joint singing elicited high engagement from participants; children in both groups were looking at the faces of one of the experimenters for over 90% of the coded intervals in the interaction (μ_{jitter}=.949, $\mu_{temporally\ regular}$=.937).

Humans in Harmony

Erica Cao

University of Cambridge

Interventions have been developed to address a perceived decline of empathy in the helping professions and in education. However, when empathy is introduced into training as an abstract concept, it can be ineffective in changing behaviour or can even have damaging effects for prosocial outcomes and well-being. Moreover, changing structural norms or attitudes has been proposed as being likely to be more effective than targeting empathy trait enhancement. In fact, much of psychological research focuses on empathy as an individual trait rather than on interpersonal measures that may be associated with it. Music can involve many components that are oriented towards an interpersonal approach, an effect that may be facilitated when incorporating narrative. A narrative songwriting intervention, Humans in Harmony, is examined as a sample intervention and through a pilot study using interpersonal approaches and measures.

Metal Health: Violence, Noise and Wellbeing in Extreme Music Cultures

Owen Coggins

Nordoff Robbins Music Therapy/The Open University

Controversies about violence, noise and health have long surrounded heavy metal and other extreme music. Assessments of the aesthetic quality and musical value of the music, its representations of violence, abjection and alienation, and its impacts on participants' mental, emotional, social and physical health all remain highly contested. Extreme and opposing claims have been made about the intense volume, distortion and amplification of such music: that it causes depression, delinquency and suicide, damages mental capacity and is highly correlated with anti-social behaviour; or, conversely, represents a uniquely powerful resource for minimising such harms and allowing individuals and groups to process trauma or challenging circumstances. While values and perceived impacts may be notoriously disputed as well as poorly understood, it is evident that noise and violence are foundational themes at stake for the health and wellbeing of participants in extreme music cultures.

This research poster will draw on my ethnographic doctoral project and subsequent monograph on the reported cathartic, healing and ritualistic aspects of an extreme subgenre of metal music, as well as on my recent research on music and mental health for music therapy charity Nordoff Robbins. The poster will summarise the history of academic research on metal and extreme music, from studies of deviance and suicide in behavioural psychology prompted by the PMRC controversy in the US, to some more sympathetic sociological and musicological responses, and on to more recent ethnographic and interdisciplinary work which includes greater participation from extreme music listeners and performers.

From this basis, the poster will highlight some ethical and epistemological challenges in previous approaches to the topic, and outline how different explicit or implicit theories of music's effects have been mobilised in contrasting arguments about how extreme music, violence and health might relate. Informed by some earlier unhelpful characterisations from different sides of such discussions, while acknowledging the potential for music to have harmful as well as helpful effects, the poster presentation will suggest methods and theoretical frameworks for more informed, interdisciplinary and participatory investigations into extreme music and how it can effect change in the wellbeing of social groups and individuals.

To what extent can a "Google docs for music" harness music's power for change?

Tom Collins & Christian Coulon

Music Artificial Intelligence Algorithms, Inc.

Due to recent technological advances in Google Chrome and Mozilla Firefox browsers, it is becoming increasingly convenient to develop web-based interfaces that expose the elements of music to creators and consumers – as opposed, say, to downloading or streaming immutable MP3 files (Wyse & Subramanian, 2013).

In August, we released a web-based interface called Jam!, which can be described as a "Google docs for music". Jam! consists of a homepage for music streaming and an editor where users can create music, in isolation or in local or remote collaboration. When two or more users point their browsers to the same editor URL for a song or piece (e.g., http://jam.musicintelligence.co/#!/editor/break_of_day), they hear/see one another's edits almost instantly (constrained only by internet connection speeds). Users can experiment with synthesizers or sample-based instruments, as well as with music artificial intelligence for note suggestion. Compositions can be made "public" at any stage, at which point they appear on the homepage, where visitors may listen to and/or up-vote them.

Jam! is not the first web-based music editor, but unlike others it does have a foot in academia and an eye to research questions regarding how music's power might be harnessed for change: (1) Evidence suggests that engagement in musical activity bolsters children's literacy, numeracy, and other non-musical skills (Slater et al., 2014; Hallam, 2010), but, given such activities are often prohibitively expensive, can technology such as Jam! afford similar benefits at lower cost? (2) What effect does interacting with music AI have on music's power for change? (3) We collect user IDs and timestamps for the musical edits made on our site, so what might this reveal about the nature of solo and/or collaborative composition? (4) How do we help publicize/recognize users' creations while respecting their privacy, and how do we protect users from offensive/explicit audio material while respecting creative freedom?

We do not have definitive answers to questions (1)-(4), but we do have an interest in discussing them with workshop attendees, and would be able to provide a poster with an exciting associated demo of the interface.

The association between music lessons and academic achievement in 10-to 13-year-old children: The mediating role of academic self-concept and personality

Franziska Degé & Gudrun Schwarzer
Justus-Liebig-University Giessen

Background

Music lessons show many associations with cognitive abilities (Schellenberg & Weiss, 2013). Beyond that, music lessons are associated with academic achievement. Research has shown that even if IQ is held constant associations between music lessons and academic achievement remain reliable (Schellenberg, 2006). Therefore, this association is not only due to cognitive transfer (i.e., IQ), but also conative transfer (i.e., personality or self-concept variables) might underlie the relation. To understand this further, we investigated the relationship between music lessons and academic self-concept. We revealed a significant positive correlation between them (Degé, Wehrum, Stark, & Schwarzer, 2014) and could demonstrate an influence of music lessons on academic self-concept (Degé & Schwarzer, 2017). Hence, academic self-concept and personality are candidates for conative transfer. We investigated whether the association between music lessons and academic achievement in 10- to 13-year-old children is mediated by academic self-concept and personality.

Methods

We tested 101 (61 female) 10- to 13-year-old children (M = 143.60 months, SD = 7.37 months). As predictor variable amount of music lessons was assessed. We measured as outcome variable academic achievement, as mediators academic self-concept and personality, and as control variables gender, grade, SES, age, motivation, schooling, and IQ.

Results

Music lessons and academic achievement were correlated significantly (r = -3.1, p = .002). To test mediation hierarchical multiple regression was used to predict academic achievement with control variables entered on the first step, academic self-concept and personality added on the second step, and music lessons added on the third step. The control variables accounted for 4.8% of the variance in academic achievement, *p* < .03. The addition of academic self-concept and personality improved the fit of the model, $F_{inc}(6, 93) = 4.41$, *p* = .001, accounting for an additional 21.1% of the variance in academic achievement. The addition of music lessons on the third step did only slightly improve explanatory power further, *p* = .05 and 3.1% additional explained variance.

Conclusions

The correlation between music lessons and academic achievement was significantly reduced by the mediators. Hence, the association between music lessons and academic achievement was partially mediated by academic self-concept and personality.

Comparing the benefits of flute and singing groups for parents and infants on the development of communication.

Tamar Hadar[1] & Fabia Franco[2]
[1]Bar Ilan University; [2]Middlesex University

This poster will report the results of a feasibility study in which longitudinal intervention was used to explore parents' views of their own and their toddlers' experiences and benefits derived from attending either a singing-only or an instrumental-only (flute) music group for three months, followed by the private use of the recorded routines specific of each group for further three months. The study was conducted using a dual-lens approach combining characteristics of developmental/experimental music psychology and music therapy, in which music is used as communication, not as entertainment.

Eighteen infants and their parents were randomly assigned to one of three groups: singing group, flute group and control group. The singing and flute groups attended three months of weekly music sessions. Both music groups incorporated a similar sequence of musical activities: while the singing group included songs with words, the flute group deployed only the songs' melodies and rhythmic patterns to lead the activities, including one-to-one interactions with the infants. Both groups offered a wide variety of percussion instruments for the participants to use freely. Parents of all groups filled in two questionnaires during the intervention: Music@Home-infant (Politimou, Stewart, Müllensiefen & Franco, 2018) and StimQ-infant (Dreyer, Mendelsohn & Tamis-LeMonda, 1996). Following the three- month intervention, 18 semi-structured interviews were conducted with all the music groups' parents. The interviews were analysed using the interpretative phenomenological analysis method. Central emergent themes included: Group meetings enhance communication amongst infants, Group meetings create a musical community, Becoming musically active at home (vocally and instrumentally), Music becomes a secure base for infant & parent, Groups' sessions create moments of enjoyment between parent and infant Groups' activities encourage musical playfulness and exploration, Groups' songs assist in infants' regulatory processes.

Language development (CDI) and attachment (VASQ) parental reports were collected at six months follow up. We are hoping to develop a RCT study in the future, to assess quantitatively the outcomes of parent-infant music groups characterised by our approach on early language and social skills, and parenting.

Motivating Stroke Rehabilitation Through Music: A Feasibility Study Using Digital Musical Instruments In The Home

Pedro Kirk[1], Michael Grierson[1], Rebeka Bodak[2], & Lauren Stewart[1]

[1]Goldsmiths University of London; [2]Aarhus University

Background:

Digital approaches to physical rehabilitation are becoming increasingly common and embedding these new technologies within a musical framework may be particularly motivating. Stroke survivors often have limited access to rehabilitation after discharge from hospital leaving them to self-regulate their recovery (Ashley, 2013). Previous research has indicated that several musical approaches can be used effectively in stroke rehabilitation (Altenmüller, et al., 2009; Schneider et al., 2007).

Aims

The current feasibility study aimed to test if digital musical instruments (DMIs) could aid in the self-management of stroke rehabilitation in the home, focusing on seated forward reach movements of the upper limb.

Methods

Participants (n=3), all at least 11 months post stroke, participated in 15 researcher-led music making sessions over a 5 week intervention period. The sessions involved them 'drumming' to the beat of self-chosen tunes using bespoke digital drum pads that were synced wirelessly to an iPad App and triggered percussion sounds as feedback. They were encouraged to continue these exercises when the researcher was not present.

Results

All physical impairment measures improved during the intervention phase and were retained or improved further during the post intervention phase. The results showed significant levels of self-management and significant increases in functional measures with some evidence for transfer into tasks of daily living.

Conclusions

The current feasibility study suggests that DMIs can provide a valuable tool for the self-management of rehabilitation, providing motivational aids for long-term exercise.

References:

Altenmüller, E., Marco-Pallares, J., Münte, T. F., & Schneider, S. (2009). Neural Reorganization Underlies Improvement in Stroke-induced Motor Dysfunction by Music-supported Therapy. *Annals of the New York Academy of Sciences*, 1169(1), 395–405.

Ashley, J. (2013, August 1). Caring for my stroke victim husband Andrew Marr changed my life. *The Guardian*. Retrieved from
http://www.theguardian.com/commentisfree/2013/aug/01/caring-stroke-victim-andrew-marr-transformed

Schneider, S., Schönle, P. W., Altenmüller, E., & Münte, T. F. (2007). Using musical instruments to improve motor skill recovery following a stroke. *Journal of Neurology*, 254(10), 1339–1346.

'If you want your baby to sleep just be quiet!' Soundscapes of infant care and infant-directed speech in three hunter-gatherer societies.

Jerome Lewis[1], Alice Rudge[1], Daniel Kricheff[1], Ingrid Lewis[1], Simone Falk[2] & Fabia Franco[2]

[1]University College London; [2]Middlesex University

This study compares the soundscapes of infant care in three egalitarian hunter-gatherer groups from Central Africa and Southeast Asia. Each group lives in small, mobile camps in forests in Northern Congo-Brazzaville (Mbendjele BaYaka/Aka), Southern Thailand (Maniq), and Malaysia (Batek). Despite living far from one another and in different national and local contexts, with different languages, cosmologies and ritual practices, they share remarkable similarities: each reject authority and leadership, have egalitarian gender relations and practice a high degree of sharing. However, musical practices in each group are strikingly different.

Mbendjele BaYaka/Aka society is highly musical, and people regularly take part in group rituals involving complex polyphonic singing and dancing. Batek people sing often, but very rarely in a ritual context, and rarely sing 'together' in polyphony or homophony. Maniq people have a rich ritual and narrative culture, but music plays a limited and peripheral role in ritual and day-to-day life, with singing an extremely rare occurrence either in quotidian or ritual contexts.

Through a combination of ethnographic and experimental research this study explores how soundscapes of infant care in these three groups might be related to these distinctive shared traits, and reflects on the similarities and differences in these soundscapes of infant care.

In the experimental part of the study, German and Russian lullabies and playsongs recorded in naturalistic mother-infant contexts were presented to each group of hunter-gatherers in a forced-choice task asking them to associate each song to one of two images. The first image displayed a playful interaction with eye-contact, the second cradling an infant with closed eyes. A control sample of participants in London were also tested. The results showed that although the Mbendjele participants showed superior performance, hunting and gathering people from the three groups on the whole were able to identify the production context of the Western infant-directed songs, with accuracy levels comparable with the participants in London.

The results suggest that infant-directed songs convey action tendencies and communicative intentions derived from universal needs in parent-infant interaction, rooted in the biological characteristics of human infants.

The Teaching of Empathy: An Integral Part of the Music Education Philosophies of Zoltan Kodaly, Shinichi Suzuki, and Jose Antonio Abreu

Lisa M. Maynard

James Madison University

Although, developed in differing time periods, and in countries (Hungary, Japan and Venezuela) that were culturally disparate and geographically separated from one another, the music education philosophies of Zoltan Kodaly, Shinichi Suzuki, and Jose Antonio Abreu evolved, in part, in reaction to perceived societal problems and needs in each of these outstanding individual's own home country. The purpose of my current study is to examine the historical, societal and philosophical underpinnings, and pedagogical approaches of the methods of music teaching utilized by Kodaly, Suzuki and El Sistema in relation to the concept of empathy.

Since their inception as independent entities, until current times, each of these three different philosophies and approaches, have served as examples of effective musical pedagogies that – whilst often resulting in outstanding musical outcomes – have also been equally successful in terms of their positive social impact. As such, each approach in later times has also been successfully transferred to other cultures. Is there a common feature that is shared by each of these three approaches that has contributed to their reported success? I would argue that each methodology evolved in part by being grounded in a concept of empathy (both emotional and conceptual). Empathy is reported to be necessary for the betterment, continuation and survival of our civilization.

Therefore, in addition to examining the historical, societal and philosophical backgrounds, and pedagogical approaches of the Kodaly, Suzuki and El Sistema methods, the current study seeks to identify key components within the body of information about each approach that might be linked to a conception of empathy—itself a somewhat contested concept. Comparisons of how the conceptions of empathy are evidenced within and between the three music learning approaches will be made, with the idea of creating a series of recommendations of key factors to be considered in the future development of music programs. The intended focus is on nurturing an understanding of music's intrinsic value and also of how the process of music making might be a means for fostering empathy.

Growing Pedagogic Sensitivity through Community Engagement as Practicum

Lisa M. Maynard, Jesse Rathgeber & David Stringham
James Madison University

Within schools and departments of music, some stakeholders consider music education field experiences/practica as utilitarian experiences to prepare students for "traditional" music education career paths (e.g., large ensemble conductor, classroom general music teacher). What if practica were to be reframed within music teacher education curricula as community engagement with the goal of helping preservice professionals to become more conscious of the myriad of ways music learning and music making manifests within contemporary society? In this study, we consider the ways music teacher education might leverage community engagement opportunities to foster preservice music educators' adaptability, empathy, pedagogic sensitivity, and desire to enact social change?

In this poster, we examine findings from a collective case study of pre-service music educators involved in seven community-based practica: (a) teaching beginning instrumental music skills with recently incarcerated men in a residential transitional home for nonviolent offenders, (b) facilitating music learning and making in a regional homeschool arts co-op, (c) engaging children and adults in informal ukulele learning and jamming, (d) teaching rock bands of adults with intellectual and developmental disabilities, (e) facilitating an after-school ukulele building and playing club with elementary-aged learners, (f) collaborating with engineering faculty and students and K-5 music teachers and students to design novel adaptive music instruments, and (g) teaching beginning violin to four-year-old students in an inclusive early childhood center.

We share reflections and related descriptive data drawn from preservice music education coursework involving community engagement practicum placements. We then articulate overarching impacts of these pratica on pre-service music teachers' developing understandings of learning, teaching, community engagement, and music education. Specifically, we will discuss how beneficial changes from community field experience impact—and potentially broaden—preservice music teachers' professional vision and foster empathetic, responsive, and community-conscious music pedagogy. Potential problems may arise out of such field work, as well, such as conflicts between perceived tradition and progressive approaches to music learning/teaching, and concerns regarding challenges and affordances of community partnerships. We conclude by offering suggestions for music teacher educator practice based on our findings.

Developing a Community Singing-Based Intervention for Perinatal Mental Health in The Gambia

Bonnie McConnell[1], Katie Rose Sanfilippo[2], Vivette Glover[3], Paul Ramchandani[4], Ian Cross[4], Victoria Cornelius[3], Hassoum Ceesay[5], Buba Darboe[6], Hajara Huma[5,6], Malick Gaye [5,6] & Lauren Stewart[2]

[1] *Australian National University;* [2]*Goldsmiths, University of London;* [3]*Imperial College*
[4]*University of Cambridge;* [5] *National Centre for Arts and Culture, The Gambia;*
[6] *Ministry of Health and Social Welfare, The Gambia*

Background

Perinatal mental health problems affect up to 1 in 5 women worldwide. Stress, anxiety and depression in pregnancy affects not only the mother but can also have long-term adverse effects on her child. Mental health problems in the perinatal period are a particular challenge in low and middle-income countries (LMICs) where they can be at least twice as frequent as in higher income countries. It is thus of high priority to develop new low-cost, low-resource, non-stigmatising and culturally appropriate approaches to reduce symptoms of anxiety and depression perinatally, for the benefit of both mother and child.

Aims

The current project suggests that music based approaches - specifically group singing- could show special promise in alleviating perinatal mental distress, in LMICs in particular. The geographical context for this particular work is The Gambia, in West Africa, where ethnographic fieldwork by first author, BM, has already explored a number of musical practices and their relationship to health (McConnell, 2017). This provides a strong base from which to explore, co-design and evaluate the potential of culturally-situated music-centred interventions for the reduction of anxiety and depression in the perinatal period.

Methods

Using a mixed methods approach, this project will explore how mental distress in the perinatal period is experienced and described by women there, and how cultural manifestations of traditional musical practices can provide a music-based approach to support women's mental health at this critical time. Focus groups and interviews will be conducted to understand the experience of mental distress in the perinatal period, and to determine whether and how a music-centred approach could be useful for alleviating symptoms. A small pilot intervention study will be conducted to ascertain the impact of a novel music-centred approach to the alleviation of mental distress during pregnancy. To measure mental health outcomes the Self Reporting Questionnaire (SRQ-20) developed by WHO for detecting mental disorders cross-culturally will be used.

Discussion

This project aims to create change by bringing together an international, experienced research team, combining academics, policy makers and leaders in the cultural sector, to bridge a gap in the current provision of women's health services, namely perinatal mental health. The partnership will build the foundation for the development of low-cost, sustainable, music-based approaches, to target perinatal mental health issues.

References

McConnell, B. B. (2017). Performing "Participation": Kanyeleng Musicians and Global Health in the Gambia. *Ethnomusicology*, 61(2), 312-332.

Contributions of the home musical environment to early musical and linguistic development

Nina Politimou & Fabia Franco
Middlesex University

The majority of children under the age of 5 appear to show spontaneous enjoyment of singing, being exposed to music and interacting with musical instruments, but whether variations in engaging in such activities in the home could contribute to developmental outcomes is still largely unknown. Aiming to fill this gap, Study 1 used a correlational design to investigate the contribution of the home musical environment in the development of musical and linguistic skills in a sample of young preschoolers. Based on the findings from Study 1, which suggested a significant association between the home musical environment and the development of key language areas (i.e., phonological awareness and language grammar), Study 2 developed and validated an instrument for the assessment of the home musical environment in infants and preschoolers (Music@Home Infant and Preschool questionnaires). Study 3 examined the impact of home experience with music as assessed with the newly developed Music@Home, on a specific aspect of music and language processing in young children, namely, the processing of structure (i.e., processing of harmonic relations in music, processing of grammar in language). Results showed that the home musical environment was associated with the development of structural processing both in language and in music.

The combined findings of the present project contribute towards a comprehensive account of the relationship between musical experience and language starting from early development. They also generate impact for early childhood policy and practice as they introduce a new area of environmental experience with potential benefit for developmental outcomes.

Learning a musical instrument can benefit a child with special educational needs

Dawn Rose[1], Alice Jones Bartoli[2] & Pam Heaton[2]

[1]*University of Hertfordshire;* [1]*Goldsmiths University of London*

This study explores outcomes related to musical learning in a child with complex special educational needs in a mainstream school. CB is a boy who was eight-years-old at the start of the study, and who was diagnosed with co-morbid Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Sensory Processing Difficulties, Dyslexia and Dyspraxia during the study.

Methods

This is a mixed methods study considering the concomitant development of cognitive, behavioural and social-emotional skills which have been associated with musical learning. CB was evaluated on a battery of developmental measures before and after one academic year of music lessons. The measures included musical aptitude, intelligence, memory, executive function, fine and gross motor abilities. The mother and form teacher provided quantitative behavioural data relating to social-emotional wellbeing. The tenor horn tutor provided qualitative data about CB's music lessons.

Results

At pretesting CB obtained a high musical aptitude score and an average IQ score. However, his scores on tests measuring motor abilities, memory, executive function, and social-emotional skills were low. Post-testing revealed large improvements in CB's fluid intelligence and motor skills, though no change in memory or executive function. Though teacher and parent reports suggested a decline in his social-emotional functioning, his musical progress was slow but good. CB's scores were compared to a group musical learning study. This provided some contextual generalizability of the general benefits of musical learning, but also illustrated specific areas in which CB's learning difficulties impacted on his musical learning and, potentially, vice versa.

Conclusion

This case study reveals how musical learning can provide amelioration for some impairments of developmental disorders, specifically in terms of the positive effect on motor development. The mixed methods approach helps us understand how important the interaction between the opportunities provided by the school and the engagement of the family were in this case. Similarly, the flexible and sensitive teaching approach, and the relationship with the student, especially engaging the student in finding appropriate solutions to learning obstacles, was crucial. CB played a solo in the end of year music festival and is still playing the tenor horn.

Maternal Moments: Investigating an app based music listening intervention for well-being in pregnancy

Katie Rose Sanfilippo[1], Vivette Glover[2] & Lauren Stewart[1]

[1] Goldsmiths University of London; [2] Imperial College

Background

Antenatal depression and anxiety happen in about 10- 15% of mothers. There have been numerous studies that have shown that maternal mental health can have a dramatic impact on not only the mother but also her developing infant. A previous small pilot study, using music specifically composed for pregnant women, showed that listening to these recorded songs significantly reduced anxiety and depression in community-recruited pregnant women (Nwebube, Glover, & Stewart, 2017).

Aims

This protocol lays out a current study in the data collection phase that aims to investigate whether listening to music during pregnancy reduces antenatal and postnatal symptoms of depression and anxiety in pregnant women diagnosed with mental illness.

Method

The study is a longitudinal two-arm randomized control trial. NHS midwives in two London hospitals will refer 150 mothers who have been identified as having mild to moderate depression and/or anxiety during pregnancy. Women randomly allocated to the control condition are treated with standard care. In the intervention condition, mothers will listen to especially composed songs for 20 minutes a day on top of receiving standard care. Mothers' progress is evaluated using a number of validated questionnaires at six different time points, three during pregnancy and three post birth. A web application was developed as a way to efficiently administer the intervention. The web application not only acts as a music streaming website but also hosts the online questionnaires. It reminds the mother, via email or text message, to listen to her music (if in the music group) and to fill in her questionnaires when they are due. It also records the amount of music listened to and holds the questionnaire data securely.

Discussion

With the growth in use of technology within health settings, this study begins to test the feasibility and effect of an app-based music intervention for this population. Music has great promise as being a widely available, inexpensive and non-stigmatising intervention. We aim to investigate how something as accessible as listening to music for 20 minutes a day might be able to help women living with antenatal mental health problems in the UK.

References

Nwebube, C., Glover, V., & Stewart, L. (2017). Prenatal listening to songs composed for pregnancy and symptoms of anxiety and depression: a pilot study. *BMC complementary and alternative medicine*, 17(1), 256.

Playing Together: Scaffolding Empathy through Music-Making for Autism Spectrum Conditions

Caitlin Shaughnessy

Roehampton University, London

Autism affects around 1% of the population worldwide and is characterized by persistent problems in interaction, communication and sensory processing. Some of the most profound difficulties for autistic people are social communication and empathy, which create barriers for living and navigating their social and emotional worlds. However, musical environments have been observed as a unique alternative space to the sensory cacophony of everyday life, and are regarded by carers, educators and professionals as a powerful platform of expression, interaction and development for autistic people. The ability of autistic individuals to recognize and engage with the affective components of musical material suggests that despite difficulties in empathizing and perspective-taking in everyday life, these capacities remain remarkably unimpaired in musical mediums. This capacity of music to act as a safe environment for interaction for those with autism has led to speculation as to how music can enable expression, act as a platform to encourage the development of social and emotional competencies and effect change for autistic people. This pilot project studied three autistic individuals with a range of musical and social abilities, and explored how music can act as a scaffold for developing empathy. Building on research that has shown how music can enhance empathy in children, focused analysis of both behavioural and musical manifestations of empathy, such as eye contact, imitation, synchrony, improvisation and joint attention behaviours, was conducted.   With this framework, the nature of the individual's empathic engagement with both the music and the music-makers was investigated. It revealed that within these musical encounters, there was a profound level of engagement with the affective aspects of musical material and between participants. This suggests that when autistic people engage effectively with empathic components of music, particularly in participatory music making, the music functions as an environmental scaffold, upon which empathic communication and relationships can be built, developed and negotiated. This further raises questions for the capacity of music to generate change in autism, and how music-making can act as a vehicle for navigating and developing social competencies away from the potential confusion of everyday life.

The effect of a voice-centred psycho-educational program on maternal self-efficacy: A pilot study

Helen Shoemark[1], Marie Dahlstrøm[2], Oscar Bedford[1] & Lauren Stewart[1]

[1] Goldsmiths University of London; [2] Temple University

Building on Bandura's personal efficacy theory (Bandura, 1997, 1982), parental self-efficacy is thought to be a key cognitive construct in parenting, reflecting the beliefs parents hold about their capabilities of successfully executing parenting tasks (Jones & Prinz, 2005; Porter & Hsu, 2003). Self-efficacy has been a target for parental psycho-educational programs, which seek to modify parental behaviours at the beginning of a parent-infant relationship. This study examines the effect of a brief psycho-educational program, Time Together, on maternal self-efficacy, mother-infant bonding, and mood/anxiety for community-based mothers. This program centres on maternal voice, timing of interplay, and recognition of infant cues. Significant changes on the Karitane Parenting Confidence Scale (KPCS) (Črnčec et al., 2008) were found. Qualitative analysis of the participant interviews and reflective diaries from the two weeks following the psycho-educational program confirmed that participation enhanced mothers' ability to understand their infant, to soothe their infant when distressed, to play and to establish an effective bedtime routine. This pilot study indicates that this is a promising approach to improve early mother-infant interaction and maternal self-efficacy.

How can an academic society bring about individual or social change? The case of ESCOM

Renee Timmers[1] & Richard Parncutt[2]

[1] University of Sheffield; [2] University of Graz

Is it appropriate for an academic society to encourage its members consider the ethical implications of their everyday academic practice and make appropriate changes? The European Society for Cognitive Sciences of Music (ESCOM) is currently working to improve equity, sustainability, and accessibility within its area of influence. Solvable problems include linguistic inequality (the dominance of English at the expense of regional languages and cultures), financial inequality (hurdles to Eastern European participants), caring inequality (the effect of childcare on academic careers), and other forms of discrimination (e.g., disability). ESCOM is encouraging colleagues from different European regions to organize music cognition events in their own languages, with English as a lingua franca. Young researchers will be supported by means of a PhD/Postdoc network that meets virtually to address questions related to research careers, international visibility, and employability. Peer support may include exchanging papers for review and proof-reading. Another ethical issue is ecological sustainability: global warming will probably have catastrophic and irreversible consequences later this century, especially in tropical or developing countries. Flying to conferences makes up a large proportion of the carbon footprint of a typical academic. At the International Conference on Music Perception and Cognition (ICMPC) in 2018, ESCOM will pilot a novel semi-virtual conference format with multiple global locations and modern audiovisual communication technologies in a 24-hour program. The new format will reduce costs for participants from financially disadvantaged countries and increase the conference's cultural diversity. The poster explains the various ethical problems that ESCOM is addressing, why we consider them important and relevant, and how we are addressing them. It is intended as a starting point for brainstorming and discussion, and as an inspiration for other academic societies, whether in music, psychology, or other disciplines.

Memory Improvement in Aging as a Function of Mood-Matching Music

Emma V. Ward[1], Anthony Mangiacotti[2] & Fabia Franco[1]

[1] Middlesex University; [2] Università di Padova

It is well documented that memory declines with age. Evidence suggests that music may have a beneficial effect on both short- and long-term memory in aging, but the underlying mechanisms are not well understood. One possibility is that the boost in memory associated with music is driven by the effect that music has upon the mood of the listener. Music is known to elicit powerful emotions, and this arousal may explain the positive effect on the cognitive processes supporting memory. Indeed, recent evidence suggests that when there is a match between the mood expression of the music and the listeners emotional state, this leads to improved performance on various cognitive tasks, whereas a mismatch between the mood expression of the music and the listeners emotional state can be detrimental to performance. Importantly, no prior study has investigated this in relation to aging.

This study examined the effect of congruency between musical emotion and mood of the listener on working memory and free recall in normal aging. A happy or sad mood was induced in healthy young and older participants, and memory measures were taken at baseline, following mood induction and after exposure to both mood-matching and -mismatching music. Recall was greater following exposure to mood-matching than mood-mismatching music in both age groups, and was reduced following exposure to mood-mismatching music compared to baseline in older adults. Working memory was greater in the mood-matching condition compared to baseline, but did not differ from baseline in the mismatching condition. This study makes an important advancement to our understanding of the mechanisms underlying the beneficial effect of music on memory in aging.

An exploration of the process of group singing for male cancer patients: a phenomenological study

Katey Warran

University of Edinburgh

Background

Cancer is one of the world's leading causes of death and one of the biggest challenges to the healthcare system, society, economy, and to medical research. It is a challenge to find effective treatments for patients, but there is also a further challenge around delivering holistic healthcare that will provide psychosocial support. In recent years as arts-in-health research has flourished, a few studies have emerged exploring how group singing may be able to provide such support. Results have been promising, including improvements to wellbeing, quality of life, and to mental health, as well as inciting biological signs of stress reduction. However, there is a gender bias toward female participants and no research has specifically focused on singing for men. Furthermore, previous research which looks at singing and cancer has focused on the product of singing, exploring its impact and how it effects health change; there is little research focusing on understanding the actual processes by which singing makes these changes. This raises questions such as: How do male cancer patients experience group singing? What meaning does the process of singing have for male patients? What part does the individual play in developing and delivering a choir?

Aims

The aim of this research was to explore how men with cancer experience the process of participating in weekly singing. Through the lens of phenomenology, it was the intention to work inductively from interview data and to place the participant at the centre of the research process.

Method

An immersive, qualitative project was conducted. Semi-structured interviews were carried out with 5 male participants with prostate cancer, lasting up to 60 minutes each, transcribed verbatim and then analysed using Interpretative Phenomenological Analysis. Questions included exploring the participants' experience of cancer, group singing and how the singing process may impact upon the lived experience of having cancer. This approach allowed for immersion in participants' experiences and themes were drawn inductively from transcripts. In addition, a researcher journal was created in order to document researcher experiences and to reinforce the validity of the study.

Results

Five superordinate themes and sixteen subthemes emerged from the analysis procedure, each of which describes the process of group singing and, in some cases, the choir's subjective impact: (1) meeting existential changes; (2) dynamic connection to others; (3) a holistic experience; (4) a positive experience; and (5) potential barriers.

Conclusions

This study is the first to explore the process of group singing for male cancer patients. The results could improve our understanding of the subjective experience of singing for patients, helping to provide insight into holistic healthcare, evaluate current choirs for those affected by cancer, and to optimize service delivery.

Music Therapists' and Musicians' Perceptions of Live Music in a Hospital Setting

Jingwen Zhang

Temple University

For the purposes of this study, Environmental Music (EM) is defined as live music provided by musicians in public areas of hospitals. Environmental Music Therapy (EMT) is an approach within the field of music therapy that uses live music to address the needs of individuals within the hospital environment. For this study, interviews were conducted with six musicians providing EM and five music therapists providing EMT to examine the similarities and differences of their perceptions of the music-making process and its impacts on the sound environment, patients, and caregivers. Interview data was analyzed using a modified grounded theory approach. The results suggested that all participants were seeking to provide music that would enhance the health and wellbeing of people in the hospitals and improve the overall hospital environment. Similarities and differences were found regarding descriptors of the music as well as how the two groups perceived music's place in the environment. The researchers found that music therapists were more specific in discussing treatment goals and how their music related to the environment. However, musicians perceived contributions to the improvement of the overall aesthetic environment and emotional states of individuals. Findings support the notion that music therapy and community music programs in hospitals are both valuable in the hospital setting, which is often associated with stress, tension, and anxiety. Concepts of "deep listening" and "attunement" are discussed with regards to the music-making process, as well as considerations for collaborations between music therapists and musicians in the hospital setting.

Directory of participants

Sara Beck	saralynbeck@gmail.com
Jethro Bor	jethrobor@hotmail.com
Greg Bryant	gabryant@ucla.edu
Karen Burland	k.burland@leeds.ac.uk
Pam Burnard	pab61@cam.ac.uk
Erica Cao	elc72@cam.ac.uk
Catherine Carr	c.e.carr@qmul.ac.uk
Owen Coggins	owen.coggins@nordoff-robbins.org.uk
Tom Collins	tomthecollins@gmail.com
Ian Cross	ic108@cam.ac.uk
Marie Dahlstrøm	marietalia@gmail.com
Franziska Degé	franziska.dege@psychol.uni-giessen.de
Pedro Douglass-Kirk	ped4416@gmail.com
Mez Dubois-van Slageren	m.m.e.van.slageren@gmail.com
Paola Esperson	paolaesperson.p@gmail.com
Jörg Fachner	jorg.fachner@anglia.ac.uk
Fabia Franco	f.franco@mdx.ac.uk
Satinder Gill	spg12@cam.ac.uk
Assal Habibi	ahabibi@usc.edu
Tamar Hadar	tumihadar@gmail.com
Tommi Himberg	tommi.himberg@aalto.fi
Jillian Hogan	hoganpq@bc.edu
Julia Ient	julia.ient@cambridgeshire.gov.uk
Beatriz Ilari	ilari@usc.edu
Kathryn Jourdan	kathryn@jourdan.me
Jin Hyun Kim	jin.hyun.kim@hu-berlin.de
Elaine King	e.c.king@hull.ac.uk
Joan Koenig	joan@ecolekoenig.com

David Leahy	dafmusic@gmail.com
Miriam Lense	miriam.lense@Vanderbilt.Edu
Ori Leshman	orileshman@gmail.com
Marion Long	marion.long@rhythmforreading.com
Psyche Loui	ploui@wesleyan.edu
Clemens Maidhof	clemens.maidhof@anglia.ac.uk
Anthony Mangiacotti	anthony.mangiacotti@phd.unipd.it
Lisa Maynard	maynarlm@jmu.edu
Sam Mehr	sam@wjh.harvard.edu
Susanne Metzner	susanne.metzner@phil.uni-augsburg.de
Nikki Moran	n.moran@ed.ac.uk
Ole Nielsen	ole_nielsen@bose.com
Chris Nicholson	c.nicholson@musicianswithoutborders.org
Adam Ockelford	a.ockelford@roehampton.ac.uk
Helen Odell-Miller	helen.odell-miller@anglia.ac.uk
Mona Persson Aronson	mona.aronson@inn.no
Stephanie Pitts	s.e.pitts@sheffield.ac.uk
Nina Politimou	a.politimou@mdx.ac.uk
Simon Procter	simon.procter@nordoff-robbins.org.uk
Tal-Chen Rabinowitch	talchenr@gmail.com
Craig Robertson	craig.robertson@nordoff-robbins.org.uk
Dawn Rose	d.rose3@herts.ac.uk
Alice Rudge	alice.rudge@gmail.com
Suvi Saarikallio	suvi.saarikallio@jyu.fi
Katie Rose Sanfilippo	ksanf001@gold.ac.uk
Jo Saunders	jo.saunders@ucl.ac.uk
Caitlin Shaughnessy	shaughnc@roehampton.ac.uk
Cat Snodin	catriona.snodin@sistemascotland.org.uk
Lauren Stewart	l.stewart@gold.ac.uk

Alex Street	alex.street@anglia.ac.uk
Renee Timmers	r.timmers@sheffield.ac.uk
Martine Van Puyvelde	martine.van.puyvelde@vub.be
Jonna Vuoskoski	j.k.vuoskoski@imv.uio.no
Katey Warran	katey.warran@ed.ac.uk
Joe Watt	wattj@parliament.uk
Graham Welch	grahamfwelch@gmail.com
Rebecca Whiteman	rnw28@cam.ac.uk
Matthew Woolhouse	woolhouse@mcmaster.ca
Ann Wright	ann@vcm.foundation
Jingwen Zhang	tuh17609@temple.edu