Communicative musicality: sound, pulse and rhythm in music and language

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1. Introduction and background

The association between human speech, language and communication and music is manifest in music education and psychology literature in a number of ways. For example, research has shown that a developing foetus can discriminate sounds in the womb from 22 weeks gestation and that early sound discrimination helps to promote later phonic and vocabulary development (Hepper, 1992). In addition, during early social interaction between caregivers and infants there are noticeable patterns of timing, pulse, voice timbre, and gesture that follow many of the rules of musical performance, including rhythm and timing conceptualised by Malloch and Trevarthen (2009) as 'communicative musicality'. Powers and Trevarthen (2010) noted the significance of daily patterns and rhythms that occur in family social patterns and practices in children's musicality and communication, stressing that 'long before they can speak, infants begin adapting to the parental culture and the family responds, giving objects and actions a clear sharable sense for the learner by offering rhythmic participation in rituals and tasks.' For some children, music can serve as a proxy language, for example where children have limited speech (Ockleford, 2010).

As far as formal care and education is concerned, the centrality of communication in children's learning of development has been established in early years policy (Blackburn, 2014, Blackburn and Aubrey, 2015). To date the potential of music in early years' settings remains unrecognised or at least undervalued and the contrasting attitudes of staff towards mark-making (literacy) and music-making (creativity) are striking (Fawcett, 2012) although more recently as far as early childhood research is concerned Pitt (2014) has studied the role of group parent-child music activities in Children's Centres and Powell, Gouch and Werth (2013) have explored the role of Froebel's Mother Songs in Daycare with baby room practitioners.

The English Early Years Foundation Stage (DfE, 2014) places music as an activity to be promoted under expressive arts and design as a 'specific' area of learning, whilst communication and literacy is a 'prime' area of learning, even though early sound discrimination promoted by music activities is a foundational step for phonic and vocabulary development. Furthermore as noted by Young (2007), the emphasis on language acquisition in early childhood as well as the basic skills of literacy and numeracy means that practitioners and researchers are required to explicitly demonstrate the efficacy of music in supporting children's wider learning rather than appreciating children's creative competencies. There is also concern that the quality and appropriateness of music activities offered to young children and their parents are given due consideration (Young, 2007). Papousek (1996: 108) stressed the importance of informal musical stimulation for very young children, illustrating the importance of children's spontaneous and natural rhythmic patterns:

> For the infancy period, it may be advisable not to disturb the earliest forms of intuitive musical stimulation by rationally guided artificial manipulations and

formal educational interventions, but to keep them concealed as a precious part of early parent-infant relationships.'

As stated by Young (2007) the majority of research into musicality in children under the age of five has been laboratory-based experimental research with little conducted in home or early years settings, except for children aged three to five where the focus has been on music education. A further limitation of research in this area is the research sample which has been predominantly white, middle-class North American or North West European mothers and their infants. Little research has been carried out in relation to the musicality of children aged three to five and even less on the musical activities of children aged birth to five in the home in England with varied socio-cultural populations.

In a 2004 – 2006 study of parents and caregivers and music practitioners of children aged birth to two in central and south west England, Young, Street, Davies, Brayley and Milne (nd: 1) found that children of this age were "experiencing a wealth of music in the home and this musical experience is integrated into screen-based multi-media, play with musical toys and sociable play within the family". They further reported that music was valued by caregivers in the home particularly for soothing and calming, however, the use of musical toys, mobiles or recorded music was often used in place of singing. TV and early childhood groups played a fundamental role in scaffolding children's musical experiences and enhancing parents' repertoire of songs and musical activities. Recommendations from Young *et. al's* study included further research, especially for minority populations.

Given the established association between music and human communication (see Malloch and Trevarthen, 2009; Ockleford, 2001; Ockleford, 2010), the project seeks to identify how young children across the age range included in the EYFS are involved in musical activities in home and out-of-home early years settings starting with an initial survey and interviews with families to establish children's participation in musical activities in the home. Research questions included:

- What are the views, perceptions and reported practices of interested stakeholders in young children's musical activities?
- What musical activities are young children involved in within home settings?

This is seen as a scoping study for further research into how the association between music and communication development can be promoted amongst stakeholders interested in young children's well-being, learning and development. Children's experiences in the home contribute to their overall learning and development. Therefore, involving parents in an initial survey and interviews has provided insight into children's earliest experiences.

2. Theoretical assumptions about children's development

Shared music activities between adults and children serve the function of 'signs' or 'cultural tools' as parents and carers use the conventions of songs and nursery rhymes to build their child's understandings of cultural conventions (Vygotsky, 1978). Grandparents also have an

important role to play in co-constructing knowledge with young children in episodes of reciprocal learning opportunities afforded by musical activities (de Vries, 2012) stressing the role of guided participation (Rogoff, 2003). Bronfenbrenner (1993) stressed the influence of the multiple integrative contexts on children's development and the relationships between them from proximal processes of adult-child social interactions in micro context of home and early years settings to the macro influence of policy contexts. Therefore the interpretation of macro level policy intentions at the micro level of home and early years settings in relation to how adults prioritise particular activities and opportunities for young children is of interest.

3. Overview of literature

Young (2005: 291) called for caution in the interpretation of claims that music can influence children's achievement in other areas stressing her concern that such claims of transferable benefits are 'being exaggerated and based on over-simple cause-and effect readings of research evidence'. However, it is useful to examine these claims whilst accepting their perceived limitations.

3.1 Associations between music and children's learning and development

Hallam (2015) notes the benefits of children participating in music activities (or actively making music) on children's intellectual, social and personal development. She illuminates specifically the advantages of active music making for children's aural perceptive and language skills, literacy skills, aural and visual memory, spatial reasoning and mathematics, intellectual development, executive functioning and self-regulation, creativity and general attainment. Further to this, she proposes that musical activities are recognised as contributing to children's personality, the engagement in education of disaffected children, social cohesion and inclusion, pro-social behaviour, empathy and emotional intelligence, psychological well-being, personal development and self-esteem, health and physical development. It is important to note that she is talking about active involvement in musical activities that involve an instrument and notes some important characteristics of music learning sessions that underpin these claims as well as the methodological issues in studies upon which these claims are made. Characteristics of music teaching include being highly interactive and enjoyable with opportunities for: developing new skills and performing; acquiring cultural capital; developing interpersonal bonds and solidarity in pursuing shared goals; on-going intensity and frequency of contact; developing mutual respect; and recognition and rewards for excellence. Receiving positive affirmation from others relating to musical activities, particularly performance is crucial in enhancing self-beliefs whatever the age of the participants. If performances are in high status cultural venues the impact is enhanced. To return to the concept of language as being central to children's learning, the following benefits have been noted.

Music has been argued to provide effective experiences for children to develop listening skills in mainstream schools and those for children with learning difficulties (Hirt-Mannheimer, 1995; Wolf, 1992; Humpal and Wolf, 2003). This is predicated on the hypothesis that when we listen to music or speech we process an enormous amount of

information rapidly without our conscious awareness (Blakemore and Frith, 2000). The ease with which we do this depends on our prior musical and linguistic experiences. This knowledge is implicit, learned through exposure to particular environments, and is applied automatically whenever we listen to music or speech. Speech and music share some processing systems. Musical experiences which enhance processing can therefore impact on the perception of language which in turn impacts on reading.

Studies with pre-school children have identified relationships between musical skills, the manipulation of speech sounds (Peynircioglu *et al.,* 2002), and phonological awareness and reading development (Anvari *et al.,* 2002). Gromko (2005) studied pre-school children who received four months of music instruction for 30 minutes once per week. The instruction included active music-making and kinaesthetic movements to emphasise steady beat, rhythm and pitch as well as the association of sounds with symbols. The children who received the eight music instruction sessions showed significantly greater gains in phonemic awareness when compared to a control group. Learning to discriminate differences between tonal and rhythmic patterns and to associate their perceptions with visual symbols seems to have transferred to improved phonemic awareness.

Hallam (2015) argues that humans are able to recognise a melody transposed in frequency easily. This skill may be related to its importance in spoken intonation. A listener needs to be able to hear the similarity of intonation patterns when spoken in different pitch registers. This stresses the role of 'motherese' in early adult-infant communicative interactions already alluded to in the concept of communicative musicality. Speech processing requires similar processing to melodic contour and is one of the first aspects of music to be discriminated by infants (Trehub *et al.,* 1984). The two seem to be processed by the same brain mechanisms (see Patel, 2009). Magne *et al.,* (2006) compared 8 year old children who had musical training with those who did not and found that the musicians outperformed non-musicians on music and language tests. The study showed that in the neural basis of development of prosodic and melodic processing pitch processing seemed to be earlier in music than in language. The authors concluded that there were positive effects of music lessons for linguistic abilities in children.

Overall, Hallam suggests that there is sufficient evidence that engagement with music plays a major role in developing perceptual processing systems which facilitate the encoding and identification of speech sounds and patterns, the earlier the exposure to active music participation and the greater the length of participation the greater the impact. Transfer of these skills is automatic and contributes not only to language development but also to literacy (Hallam, 2015).

For young children, participation in musical activities does not necessarily and indeed often might not involve a musical instrument, especially in the home environment. Furthermore such activities for very young children might often be shared musical activities given the need for them to be supervised in their play and social activities.

As previously stated literature in this area is sparse and has predominantly been carried out in Canada and Australia. These studies provide an interesting overview of parents' perceptions of children's musical activities in the home.

3.2 Benefits of shared music activities

In a longitudinal Australian study that used a large dataset (5,107 children) from the Infant Cohort of the Growing up in Australia: The Longitudinal Study of Australian Children (LSAC) study (parent reports), Williams *et al.,* (2015) aimed to identify the benefits of shared musical activities in the home and any associations between frequency of these activities and later outcomes for children in comparison shared reading activities. On analysing data from children's participation in activities at age two to three years and later outcomes at four to five years, his findings suggest that the frequency of shared parent-child music activities (in common with shared reading activities) correlate positively with children's later prosocial skills, vocabulary, numeracy and attentional and emotional regulation. This contrasts with an earlier English study (Hartas, 2011) that examined teachers' reports of children's outcomes and found that the frequency of home musical activities was unrelated to literacy and social-emotional development. Williams *et al.,* (2015) further found that shared music activities were more strongly associated with later prosocial skills than shared reading activities. Williams and colleagues also point out the possible additional benefits of shared music that relate to the physical and multi-sensory nature of musical activities that might promote intersubjectivity and development of children's fine and gross motor skills.

Where children are engaged in shared musical activities with older generations (such as grandparents) there are benefits to both children and grandparents of 'intergenerational music making' including socio-emotional benefits and the fostering of intergenerational relationships that can benefit older generations by making them feel valued, introducing them to technology used by younger generations for musical activities and both generations to new genres of music (de Vries, 2012).

Children's musical activities in the home

Parents play a foundational role in nurturing young children's development including participation in music. Arguably, parents from musical backgrounds are more likely to provide opportunities for participation in musical activities for their children, especially infants (de Vries, 2009; Ilari, 2005) Custodero *et al.,* 2002), however, this does not lead to the conclusion that parents without a musical background do not provide such opportunities. Custodero *et al.,* (2002) found that whilst infants were likely to be exposed to singing and music playing daily, children aged 24 months and older were less likely to experience singing and music making. By contrast, Gembris and Davidson (2002) suggested that there was a general decline in the number of parents singing to infants. In addition, mothers are more likely to sing to their infants than fathers and more likely to sing to first born than later born children (Custodero *et al.,* 2002; Ilari, 2005).

In a study of shared music activities provided in the home for children under the age of five, de Vries (2009) (n 63) found from his survey participants that despite parents reporting that they valued the benefit of music for children's development, only 18% of parents played

music to their children daily, 9% sang to or with their children daily, 14% encouraged musical play with their children, 11% played instruments with their children and none encouraged their children to create/make up their own music. Although nearly half (49%) of parents played instruments with their children once a week or less and a similar percentage encouraged children to create their own music, they also reported that children's participation in musical activities was something that was best organised outside the home due to their own musical incompetence, as exemplified by these statement from focus group participants:

> I had one of my kids go through pre-school two years ago and.. they just love music. They seem to do it every day there, so it's covered. This is lucky because I'm so unmusical. I'm no musician, just like I'm no scientist or maths whiz. So I don't do those things with my children, that's what their teachers do. But I do read to my kids – everyone does, you know how important that is, the whole literacy thing.

de Vries (2009: 398)

This is especially surprising when we consider that 51 of his survey participants and seven out of eleven focus group participants reported having a musical background. Other reasons for the low levels of shared daily engagement in music activities in the home included lack of time, lack of parental about music and parents reporting that children could access music independently through use of technology such as videos and CDs which did not require adult participation. Parents often report that the car provides an ideal opportunity to engage in shared music activities with children (de Vries, 2009; Ilari, 2005).

3.3 Children's preferred musical activities in the home

In a study that involved collecting young children's (aged five to six) perspectives on preferences for shared activities in the home, Denac (2008) found that children's preferred activity to share with parents was listening to music, followed by singing songs and movement to music. Their favourite type of music to listen to in the home was popular music, followed by popular folk music, songs for children with folk songs and classical music being least favoured by the children.

3.4 Types of musical activities in the home

Williams *et al.*, (2015) suggested that shared parent-child music activities could include joint and supported singing (including action songs, counting songs, nursery rhymes and children's songs), generating original songs to accompany routine activities, dancing, playing basic instruments and listening to music on CD, DVD and MTV (Barrett, 2011). de Vries (2009 asked about the frequency that parents played music, sang to or with their children, encouraged musical play with children, played instructions with children and encouraged children to create/make up their own music. In addition he asked about children's participation in music programmes. Denac's categories included listening to music, signing songs, playing instruments, creating focal contents and dancing and movement to music. This suggests that common musical activities for young children might be singing, dancing,

listening to music and playing instruments all of which could be a solitary or shared activity and these categories have informed survey questions for this study.

4. Aims of this study

This project seeks to explore the views, understanding and reported practices of interested stakeholders in young children's musical interactions in home and out-of-home early years settings. This phase of the project focused on children's experiences in the home.

Research questions include:

- What are the views, perceptions and reported practices of interested stakeholders in young children's musical activities?
- What kinds of musical activities are young children involved in within home settings?
- What kinds of organised musical activities are young children involved in outside the home?
- What are parents and caregivers perceptions about the benefits?

5. Methodology

A mixed-methods approach was adopted that involved survey and interviews. An online survey was designed and trialled with three parents and carers of children aged birth to five before being formally launched and advertised using existing networks and social media. Attempts were made to promote the survey as widely as possible to a range of different social and cultural groups, for example, parenting groups aimed at both genders, groups for grandparents and minority ethnic and cultural groups, fostering networks and general social media groups. Parents, grandparents and foster carers of children aged birth to five residing in England were invited to participate. Questions included closed questions relating to demographics of participants and number and ages of children in the family as well as the category of musical activities that young children participated in and these allowed for descriptive quantitative data. Open questions about the perceived benefit of young children's participation in musical activities in the home, organised musical activities outside the home and general comments provided qualitative data. Following this parents were invited to participate in an interview to explore emerging themes in more detail. Parents were asked about the families' musical background, the nature, frequency, context and parent/child preferences of children's musical activities in the home as well as barriers and benefits. They were also asked about children's participation in organised musical activities outside the home.

6. Ethical considerations

The ethical guidelines of the British Educational Research Association (BERA, 2011) were followed at all times with regard to consent, anonymity, right to withdraw, storage of data,

researcher conduct and equality. The project was approved by the Faculty of Health, Education and Life Sciences Ethics Committee at Birmingham City University. All participants provided informed consent and were reminded of their right to withdraw before interviews and observations commenced. Participants' identities were protected by the use of pseudonyms. Data were stored securely on University equipment and analysed thematically in order to reduce bias.

7. Analysis

Data were analysed to answer the research questions at the first level allowing common and discrepant themes to emerge subsequently. Research questions identified *a priori* themes and thereafter emerging themes were identified. Qualitative content analysis provided the opportunity to organise, condense and categorise data through a process of interpretation of and inference from participants' original expressions. This was an inductive process rather than being theory guided and deductive. A process of reducing and clustering to form initial codes or sub-categories that described followed. The unit of textual analysis was an extract from a transcription with factual connection to an idea and issue. After initial codes had been identified in data of two or three transcripts, codes were compared with each other according to similarities and differences to determine which data "look alike" and "feel alike" as suggested by Lincoln and Guba (1985: 347). This clustering process led to the formulation of sub-categories with some minor differences in the same stakeholder group. In the second stage, main categories were formulated by abstracting and combining sub-categories of each stakeholder group. Categories stayed close to the original expressions of the information; broad categories included more abstraction of the ideas of which categories were presenting. Member checking was employed by sharing emerging themes with participants to increase validity and trustworthiness.

8. Results

8.1 Survey

Participants

A total of 125 responses were received to the online survey. Five responses were from outside England (America, Scotland and Europe) and these were excluded from the data analysis which left 120 responses. Of these 80% were parents, 17% were grandparents and 3% were foster carers. The majority (94%) were female and 89% reported to be of White British heritage making this a narrow socio-cultural participant population. In addition, 70% were married and qualified to degree or post-graduate level and 93% stated that they held no religion or were Christian. Interestingly, 20 participants reported that they had a musical background or that the family was musical.

The participants had 157 children between them 52% of which were boys and 48% girls. The number of children reported in each age band was similar with the majority being the in 12 –

24 and 48-60 month age bands as shown in table 1 below. A few children were reported to have difficulties in their learning and development.

Table 1: Number and age of children reported by participants

Age	**Total number of children**	**Number of boys**	**Number of girls**	**Number attending EY settings**	**Number of children with difficulties in learning and development**
0-12 months	29	15	14	6	0
12-24 months	36	19	17	18	1 (no speech at 23 months)
24-36 months	32	17	15	25	0
36-48 months	22	16	8	25	1 (learning difficulty)
48-60 months	36	15	21	33	4 (3 speech, 1 co-ordination)
Total	**157**	**81 (52%)**	**75 (48%)**	**107 (68%)**	**6 (3.8%)**

Age groups used are in line with those in the EYFS. As might be expected the number of children attending early years settings rose incrementally with age.

Themes emerged from analysis of the data in the areas of the importance of participation in musical activities in the home; the value of participation in musical activities for children's overall development; the nature and frequency of musical activities that children participate in within the home; the role of adults and technology in children's musical activities; the range of organised musical activities that children participate in outside the home; the perceived difference between spontaneous musicality organised, structured musical activities.

i) Value of participation in musical activities

All but one participant answered positively to a question about the importance of young children's participation in musical activities. The remaining participant stated that she felt it was "important for children to choose their own activities."

The reasons given by participants for affirmative answers to this question related to the perceived benefits for children's learning, development and well-being as shown in figure 1 below.

The primary benefit was that participation in musical activities served to promote children's communication skills. Included in this were the skills of listening, speech, language and self-expression.

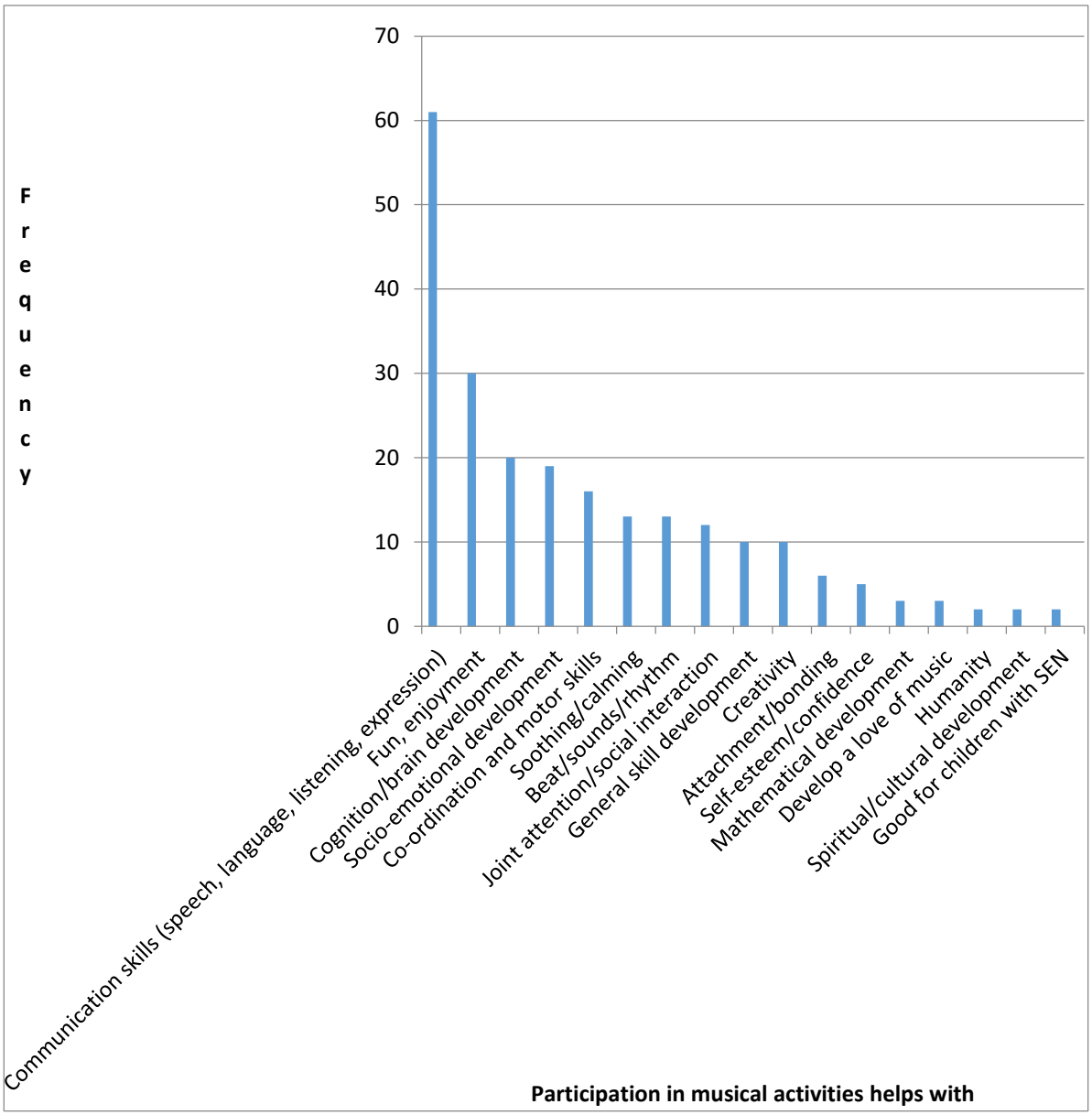

Figure 1: Benefits of spontaneous musical activities in the home

Following this, children's enjoyment and sense of fun was thought to be important as was the benefit for children's 'brain development'. As can be seen from table 1, the perceived benefits were wide-ranging and included aspects related to spirituality and humanity and emotions as exemplified by the comments below:

> Music is part of being human. Interaction with music allows children to express their emotions and feelings including sadness, love, singing,

> happiness, joy, imagination, movement, anger, quiet time, dance, joy and exuberance.
>
> It helps to develop children's communication and language children learn best through activities and experiences that engage all senses eg music dance rhymes and songs. Communication helps children to build social relationships and enables them to become skilful communicators.
>
> This is a house full of music and both my children have been sung to and listened to music since birth. Firstly they love it and secondly it's a great way of learning.

Eight participants felt that music was effective for communicating with pre-linguistic infants. For six participants, children have toy instruments and four had 'real instruments' whilst another two said that children make their own instruments and another that children use ipad apps to make music.

ii) Frequency of involvement in musical activities

In contrast to previous studies (for example de Vries, 2009) the majority of parents (73%) reported that children participate in musical activities every day, with the remainder reporting that children participated less frequently but in most cases at least weekly as shown in figure 2.

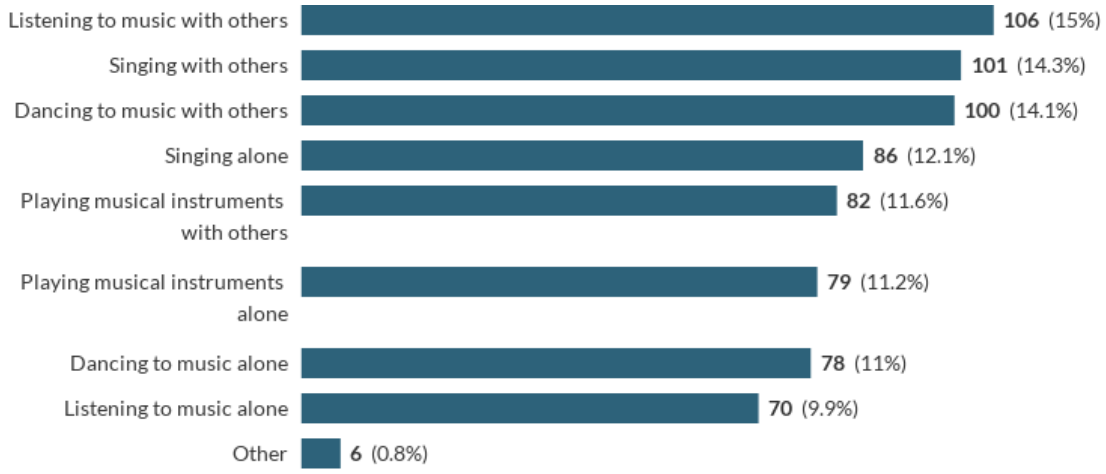

Figure 2: Frequency of children's participation in musical activities in the home

Twenty-one participants qualified this answer by saying that music was a part of everyday life, nine said that they sing to their children 'all the time'. For eight participants, music was something that happened in particular contexts, as "music/singing is something that takes place mostly in the car" whilst for five grandparents, the frequency was determined by the frequency of visits from grandchildren. Two participants said that frequency depends on the weather as music was something that happened indoors and if the weather was fine, the children would be outdoors.

> Music is part of our life. We sing to make things interesting e.g. phonics, car journeys. Our son is autistic and music helps him to reduce anxiety and relax.
>
> Today we turned on some genre of music that was very rhythmic and percussive, with vocals, we danced around! Later we pretended to be King Neptune and my granddaughter was the wind kitten! We danced with scarves to classical music (harp).
>
> I care for the children 2 days per week and know how it is beneficial to their all-round development so we do lots of singing and musical activities which are greatly enjoyed.

ii) Typology of musical activity

As shown in figure 3, participation in shared musical activities was reported by participants more frequently than solitary musical activities. The activity that children were reported to participate in most frequently was listing to music with others, followed by singing with others and dancing to music with others, with playing musical instruments with others less frequent than other shared activities. Included in the 'other' category were:

- Using music apps on touchscreen technology (ipad);
- Finding out what objects make different sounds, the creation of sounds using different objects;
- Creating their own music with instruments, sound makers and their own voice;
- Being sung to (for example bed-time lullabies);
- Performing actions to songs.

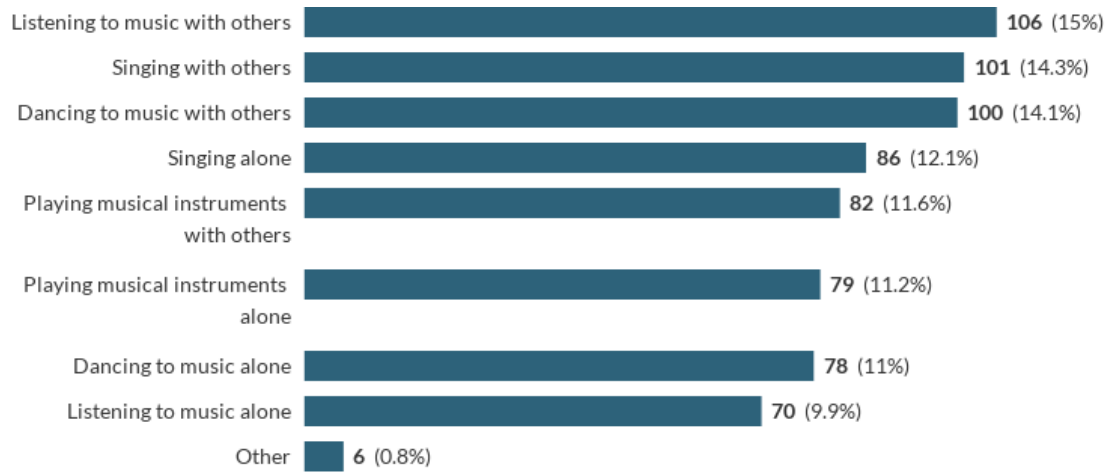

Figure 3: Types of musical activities that children participate in within the home

iii) Access to musical activities

The majority of participants reported that children had free access to musical activities of some sort in the home (84%), although some parents reported that access to particular activities was limited for a variety of factors:

> She ignores musical instruments if they are left out, but is really excited when the box of instruments is brought out. We also don't have music playing all the

time, so again access is limited - though she can and does sing or dance without music at any point during the day

Factors that limited access were reported to relate to:

- The cost of buying real instruments for five participants;
- The child's age and inability to utilise real instruments for five participants;
- Adult supervision is required for real instruments or activities that require the use of technology for four participants;
- Limited instruments available within the home for two participants;
- Parents had hearing difficulties making the 'noise' of children's musical activities a barrier for one participant;
- Grandparents' profession (childminder) meant that instruments needed to be stored safely for one participant;
- Adult time was a barrier for one participant;
- One child was reported to "not engage with music."

iv) Adult participation in children's musical activities

Nearly all participants stated that they joined in with children's musical activities in the home (98%). Not surprisingly, the activities that most participants joined in with were singing with others, listening to music with others, dancing with others and playing musical instruments with others. However, a proportion of participants said that they joined in when children were engaged in these activities in solitary as shown in figure 4 below:

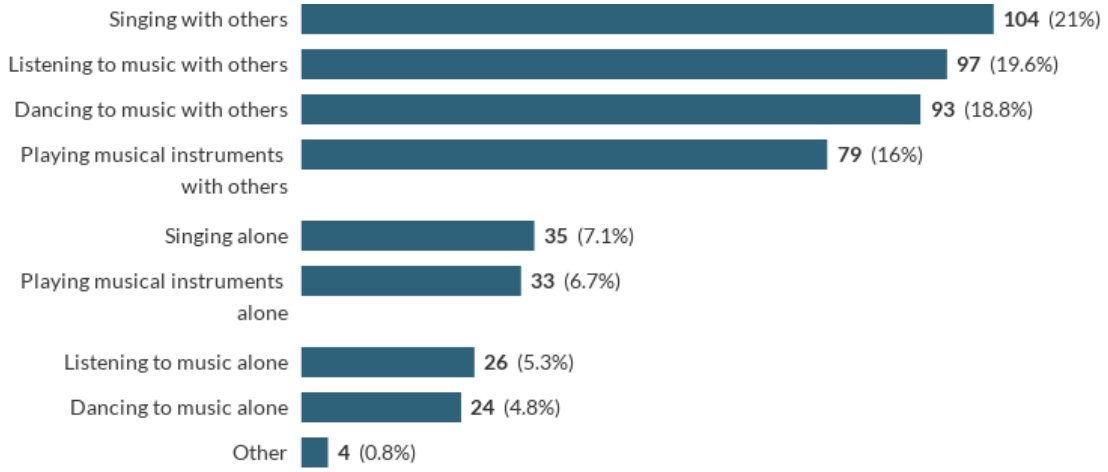

Figure 4: Musical activities that parents, carers and grandparents join in with

v) The role of technology in children's musical activities

The role of technology in children's participation in musical activities in the home was influential for 65% participants across the range of activities discussed as shown in figure 5, even with activities such as playing instruments alone.

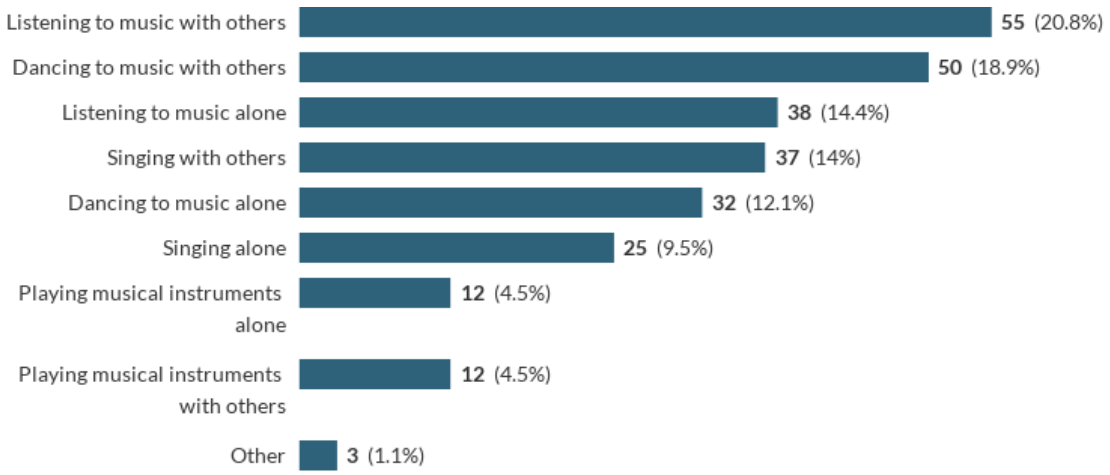

Figure 5: Musical activities that are supported with technology in the home

vi) Children's participation in organised musical activities inside and outside the home

A relatively small number of children (11.6%) were reported to be participating in organised musical activities in the home including lessons to use a piano (six), a guitar (three), a violin (two), a cello (two) and a clarinet (one). However, two participants stated that children at this age were too young for instruments and were "playing around with sounds."

Table 2: Organised musical activities outside the home

Activity	**Frequency**
Music sessions at early years setting (childminder/nursery/pre-school)	21
Music sessions at local library (often called 'Rhyme Time')	12
Music/singing sessions at baby and toddler groups	11
General music groups for children under 5	7
Ballet/gymnastics	5
Baby/toddler singing groups at local church	3
Children's choir	2
Colourstrings classes	2
Sing and sign	2
"Toddler Sense", "Gymboree", "Busy Bees", "Bongo Beats", "Hartbeeps", "Dandy Development", "Tiny Talk", "Musical Picnic", "Mini Maestros" "Baby Sensory"	1 each

A significant number of participants reported that their children participated in a range of organised musical activities outside the home (64%). The range of activities is shown in table 2.

The perceived benefits of children participating in organised musical activities were similar but subtly different to those for children's spontaneous and shared activities with families inside the home as shown in figure 6.

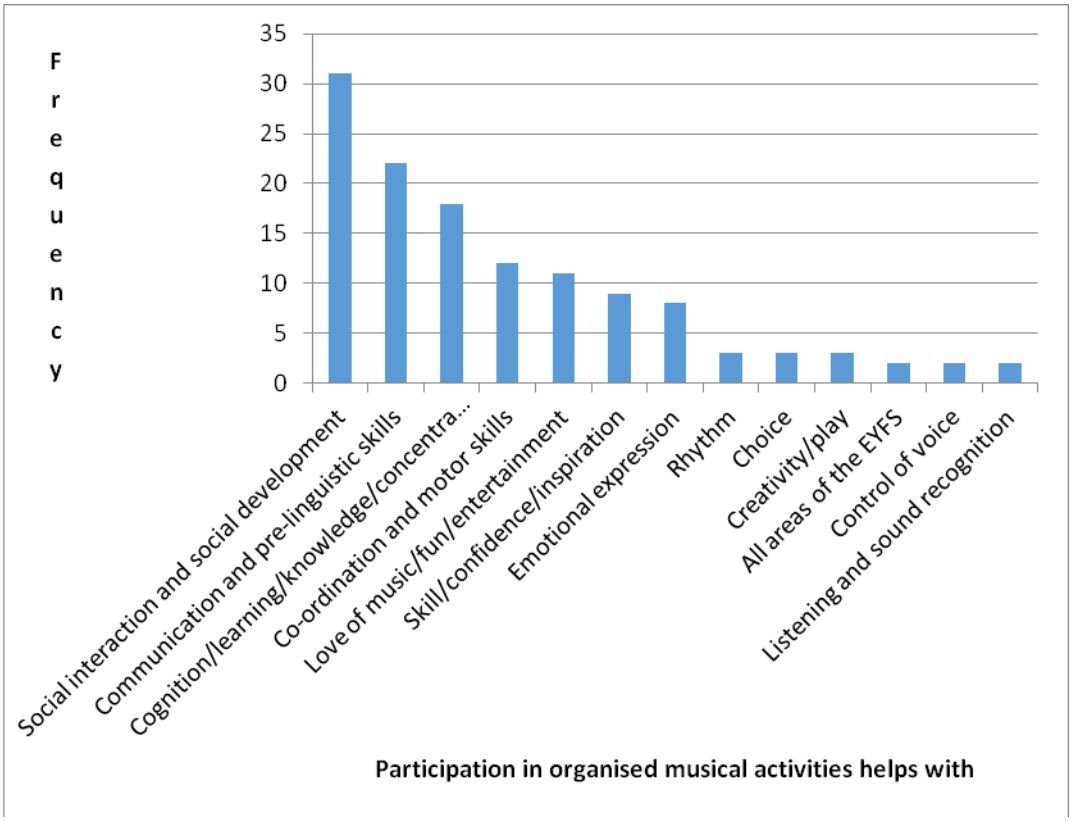

Figure 6: Benefits of organised musical activities

For example, the primary benefit for organised musical activities related to children's social interaction and social development with communication being secondary to this and fun/enjoyment being less significant than for spontaneous musical activities. There was no association made between organised musical activities and spirituality or humanity as was the case for spontaneous activities.

> My eldest has cello lessons and I supervise his practice. He is learning that it is through effort you learn music and that the world is not as simple as you press a button and it is done.

> Our 2 1/2 year old little boy picks up tunes (not words!) very quickly, is developing a pretty good sense of pulse, achieves results and learning that hard work can be fun (we use games and rewards systems). He learns through music that he can pitch match, sing in tune and orally blend words. (He hasn't been taught any letters - he can just say the word if you say the sounds). He loves music of all sorts!

> All aspects of the EYFS can be supported through music sessions e.g. music from other cultures, counting through song, moving to music.
>
> Away from academia it is important for exercising social interaction with other children and adults, as well as learning other skills that are not covered by the curriculum. Music is a gift, to entertain and be entertained by. Singing is beneficial to the vocalist and their chest expansion.

One parent expressed her concern over the quality of music provision within her child's early years setting, echoing concerns from Young (2007) about the quality of musical activities offered to young children in formal settings:

> The singing at the nursery is of very poor quality. The instruments at the nursery are excellent but without beaters and not presented/supported well.

8.2 Interviews with parents/carers

Thirty-one parents provided contact details in their survey response and of these only five responded positively to a request to participate in an interview. All five parents were interviewed using a semi-structure interview schedule that allowed for parents' own reflections on children's early experiences in the home. Two parents were interviewed at Birmingham City University campus, two were interviewed at their home and one parent was interviewed by telephone according to participant preferences. Details of participants are shown in table 3 below:

Table 3: Participants involved in interviews

Participant	Age group	Gender/Ethnicity	Location	Role	Number/age of children
1	31-40	Female/Indian	West Midlands	Parent	One daughter aged twenty-three months
2	31-40	Female/White British	West Midlands	Parent	Two sons aged thirty months and six months
3	31-40	Female/White British	West Midlands	Parent	Daughter aged two months and son aged twenty months
4	31-40	Female/White British	West Midlands	Parent	One son aged fourty-two months
5	51-60	Female/White British	West Midlands	Grandparent/ foster carer	Grandson aged eleven months, fostered children various ages.

i) Family musical background

Two participants reported that they had a strong musical background. One of these participants stated that both she and her partner were music teachers and the reported that her partner plays an instrument in a band. Another participant reported that although she did not have a musical background, the family had a strong theatrical background, including dancing and singing, which had increased her experience of, and interest in, music. The remaining two participants stated that neither they or their partners or wider family members were particularly musical.

ii) Musical activities in the home – context, frequency and location

In terms of defining music in the home, two participants described this in terms of family practices stressing that music is "part of everyday life" and "part of everyday routines" such as feeding, hygiene routines and food preparation routines. In this regard, music was useful for calming, communicating with and motivating children. Four participants described music in the home in terms of instruments and singing and the range of musical instruments (both toy and real instruments) that were available for their child, whilst the remaining parent stressed the rhythms and patterns that inhered in nursery rhymes as being a significant part of her child's music in the home.

Children's musical activities in the home were reported to occur daily and were described by participants in four categories of playing instruments (five participants), singing (three participants), listening to music (three participants) and listening to and reciting nursery rhymes (two participants). The range of musical instruments (both and toy and real) that children had access to in the home included:

- Ukulele
- Drum
- Piano
- Glockenspiel
- Hand-bells
- Tambourine
- Shakers
- Trumpet
- Piano
- African drums
- Russian dolls with bells
- Recorder
- Harmonica
- CDs

Whilst two parents stated that musical activities occur mainly in the playroom or the lounge and kitchen, all parents reported that music activities could occur "anywhere" and everywhere" including in the car, where music could be a distraction to boring car journeys. There were, however, particular times of the day where there was an increased likelihood of

music (especially singing) for younger children (birth to two years old). These included bath-time, bed-time, waiting for food to cook, feeding times, hygiene routines such as nappy changing:

> If I am stuck in traffic I find either singing or telling a story with sound effects is a good way of distracting them from a boring experience... for babies it's about fun, they swing their bodies in time to the music, in line with the music spontaneously.

Once children matured beyond infancy and toddlerhood, three parents reported that children were more likely to prefer stories to singing and nursery rhymes. One parent emphasised the role of technology in enhancing children's musical experiences:

> I think family time is very different now, it's very easy to plug children into a TV or put the ipad in front of them and I think they're getting music that way.

iii) Barriers to children's musical activities in the home

Three parents mentioned parents or children's lack of confidence in music (especially in relation to the use of instruments) as a potential barrier to children's participation in musical activities. It was stressed by one of these parents that this barrier could be mediated to some extent by parent and toddler groups in encouraging parents to "join in" and "have a go":

> I think one of the main barriers is confidence with parents in instigating music making. I really like what all the toddler groups offer in terms of encouraging parents to do things, you don't have to have an amazing voice and music can be as cheap or as expensive as you want it to be – the only barriers are those that people put in the way.

One parent stated that other toys could be a distraction, especially if too many toys were available to children, and the remaining parent reported that cost of instruments and/or lack of parental interest in music could be a barrier. One parent suggested that a database of online resources be available for parents so that they could easily find videos and other resources to share with their children that had been professionally trialled and validated.

iv) The role of adults and peers/siblings

Parents described their own role in their children's musical activities in the home in a number of ways. Three parents felt their role was to join in with whatever their child initiated, whilst two others said reported that their role was to initiate musical activities for their child to join in with. Three parents stressed their teaching role in their child's musical activities in terms of modelling enjoyment of music and correct use of instruments. One parent each stressed the important role for parents in facilitating participation in musical activities and praising children for their "music making". All parents described the role of peers and siblings as providing opportunities for socialisation in musical activities.

v) Favourite musical activities

In describing children's favourite musical activities, parents related a range of activities that including singing, using percussion instruments, reading nursery rhyme books with CDs. In

contrast all parents reported their own preference for singing with their child above other musical activities, although one parent added that she preferred musical nursery rhymes that involve movement and interaction:

> [I like] anything that has gestures and movement because I like turning off the TV and engaging them in that way. For example, "row, row, row your boat" when E was born was a great motivator to do my stomach exercise, so it was multi-purpose. It's so easy to do and involves direct interaction, singing together and doing all the gestures and I like making up new versus by looking at things around the room, I think that's the most fun.

vi) Benefits of children's participation in musical activities in the home

Parents described the benefits of children's participation in music in diverse ways. For example, two parents discussed the benefits for children's sense of enjoyment and contribution to their communication development. Also mentioned by one parent each was that music participation in music offers distinctive benefits in terms of inclusion, participation, calming, soothing, engagement and adult-child interaction "on a different level". In addition one parent mentioned the use of music 'apps' to support parent-child relationships by recording her voice for her child to play back when she was absent from the home.

vii) Musical activities outside the home

All parents reported that their child either currently attended organised musical activities outside the home or they were considering enrolling their child for them in the future. Activities reported by parents included:

- Parent and toddler groups with musical activities
- Rhythm Time
- Music and Movement classes
- Multi-sensory baby signing (with singing)
- Specialist music provision within mainstream nursery class

Typical costs reported by parents ranged from £1.00 per session for parent and toddler groups to £5.00 per session for specialist music groups and parents travelled a range of distances from one mile to ten miles. The perceived benefits for children and parents in attending musical activities outside the home were reported as socialisation benefits and children's confidence reported by two parents and children's music education by another two. The remaining parent stated that she and her child had gained a repertoire of songs and rhymes that they could practice at home and stressed that many parents attending musical activities with their child had little prior knowledge of rhymes and songs to engage in with their child. In this sense, organised musical activities provided an important social and relationship function for families. However, one parent expressed concern about qualifications and knowledge held by professionals who organised music groups. She was unsure whether they

had sufficient knowledge of child development or whether there were any safeguarding procedures that were required.

9 .Discussion and conclusion

This paper has reported on the findings from an online survey and semi-structured interviews with parents, grandparents and foster carers of children aged birth to five residing in England. The narrow socio-cultural sample of self-selected responses to the survey is a limitation. However, 120 participants responded and this provided a sufficiently large sample for this pilot study which can be used to attempt to widen the sample to other parts of the population. The sample also provided an overview of young children's musical activities within and outside the home for children aged from birth to five in line with the age range for the Early Years Foundation Stage in England and this represents an under-researched area of early learning and development. Interviews allowed for emerging themes from the survey to be explored in more depth. However, it would have been beneficial to interview a more significant sample. Using social media to promote surveys and invite participants is problematic and can result in a narrow self-selected sample. Further research could explore how to interest a wider range of participants in research when using social media to promote and invite participants.

From the survey, twenty participants reported that they had a musical background or that the family was musical. There were no significant differences in the frequency or type of musical activity reported by this group of participants. There were also no significant differences between their perceptions of the benefits of musical activities for children and the remaining participants. Grandparents were joining in with young children's musical activities and emphasised how much they enjoyed and anticipated visits from their grandchildren stressing the intergenerational benefits of shared musical activities identified by de Vries (2012). Only two parents that were interviewed had musical backgrounds. In interviews parents' reports of the benefits of children's participation in musical activities in the home varied widely from inclusion and participation to calming and soothing.

In contrast to previous studies (for example de Vries, 2009) young children in this study were participating in musical activities daily in most cases and in almost all cases at least weekly. The range of musical activities was wide and adults were joining in with children's musical activities. Given the associations between the frequency of shared musical activities and children's later prosocial skills, vocabulary, numeracy and attentional and emotional regulation identified by Williams *et al.,* (2015), this is an important finding. The role of technology in children's musical activities is an interesting finding. In common with Denac's (2008) findings about children's preferences, children were participating mostly in listening to music and singing songs followed by activities that involved movement and instruments, although children's preferences were not gathered in this study.

Participants in this study appeared to recognise the value and importance of children's spontaneous musical activities and to encourage it describing the benefit for children's holistic development and the role of music in attachment and bonding. However, in common

with de Vries's study, they also appear to have identified benefits for children in attending organised, structured musical activities both within the home, but more substantially outside the home. In interviews it appeared that this was related to children's musical development and building parents' and children's confidence to participate. It was interesting that only one parent in interview expressed concern about the nature and quality of professional qualifications needed to organise musical activities for young children and parents as this was a matter of concern raised by Young (2007) and one participant in this study.

From his study, de vries (2009) suggested that initiatives that encourage parental engagement in literacy programmes be extended or adapted for parents to encourage creative musical activities in the home. However, it is clear from this study, that as far as this (admittedly narrow) sample is concerned, participation in musical activities occurs regularly for young children, their parents, foster carers and grandparents. However, the high number of organised, structured activities that children participate in outside the home is an area worthy of further investigation to ensure that experiences offered to young children do not serve to formalise their innate musicality thereby 'disturbing the earliest forms of intuitive musical stimulation by rationally guided artificial manipulations and formal educational interventions' Papousek (1996: 108).

10. Recommendations

- It is recommended that parents and carers are offered guidance and advice about the importance of acknowledging and valuing young children's spontaneous musical activities in the home. It is a matter of concern that parents might lack confidence to instigate and encourage young children's musical activities in the home;
- It is recommended that an online database of trialled and validated musical resources be made available for parents and carers to use in the home;
- It is recommended that this study is extended to include particular groups of children and families such as minority ethnic groups and children with disabilities;
- It is recommended that a study to explore young children's musical activities in early years settings be conducted to explore the understanding and practices of early childhood practitioners given the importance of young children's spontaneous musical activities in their overall and holistic development as noted from the literature review in this report.

11. Final reflections

In the duration of the project, the interim findings from the survey have been presented at:

- Birmingham City University Education Conference, July 2015
- TACTYC annual conference, October 2015, ICC, Birmingham

I have met with Dr. Jessica Pitt from CREC (MA Early Childhood Music co-ordinator) who is interested in future collaboration.

An article has been submitted to the International Journal of Music Education and this is under review.

An article will be submitted to Early Years in the coming months

Interestingly when I visited the Champion Centre in New Zealand, music therapy was the first session for children with disabilities to engage in during their early intervention sessions as it was perceived to calm children as well as strengthen parent-child relationships in readiness for other EI sessions.

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