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The role of community-based music and sports programmes in parental views of children's social skills and personality

ABSTRACT

In this article, we report on parental perceptions of socio-emotional skills and personality of children who were involved in community-based music and sports extracurricular (EC) programmes, and a group of children not participating in EC activities. This study is part of the USC brain and music project that investigated the effects of music education on the cognitive and socioemotional development of children from underserved neighbourhoods in Los Angeles for 5 consecutive years. Our primary aim with this study was to examine parental views on the potential effects of EC programmes on children's socio-emotional skills and personality. Parents were interviewed yearly and were asked to rate their child's skills and personality. After four years, parents of children involved in EC activities rated their children higher on the emotional stability personality trait, lower on aggression and lower on hyperactivity compared to children not involved in EC activities despite no differences in these measures at the beginning of the study and before children's entry into their programmes. These and other findings are discussed in light of Bronfenbrenner and Morris's Bioecological Model of Human Development. The implications for community music are also outlined.

KEYWORDS

parental perceptions
extracurricular (EC)
programmes
music
sports
middle childhood
social skills
personality

BACKGROUND

School-aged children often spend their out-of-school time navigating between EC, community-based activities and unstructured activities (Mahoney et al 2005). EC activities can be defined as those occurring outside of mandatory school time, usually organized and led by adults for groups of similar-age children (Friedman 2013). According to the Pew Research Center, most American children take part in some type of EC activity (2015). This is not surprising as participation in EC activities has been viewed in a positive light, heaping up several benefits for children, families and communities alike. These include gains in academic achievement, reduction of behaviour problems, development of a range of skills – from physical to artistic – and increases in psychosocial competences and self-esteem, to name a few (Fredericks and Eccles 2006; Mahoney et al. 2005).

EC activities are usually divided into three main types: academic, athletics and artistic (Friedman 2013). Athletic and artistic programmes – musical programmes in particular – share some commonalities, including the fact that they require a considerable amount of practice for one to reach expert levels. Sports teams and musical ensembles are also collective in nature and involve sensorimotor learning (Zachopoulou et al. 2004), motivation and self-regulation (Simpkins et al. 2010). Participation in both sports and music has been linked to cognitive, motor and socio-emotional development in children and adolescents (e.g., Bailey 2006; Metsäpelto et al. 2010; Schellenberg 2011).

Associations between socio-emotional development and participation in EC programmes have been discussed in several reports (see Metsäpelto and Pulkkinen 2014). For example, in a three-year longitudinal study that examined the effects of a wide range of afterschool activities, Posner and Vandell (1999) found that African American children from low-income families who spent more time in non-sport EC programmes tended to be better adjusted emotionally by the time they were in 5th grade. Molinuevo and colleagues (2010) found weekly participation in EC activities to be related to behavioural and emotional adjustment and social competence in Spanish school-aged children. In their study, gender effects were found, with sports promoting better emotional and behavioural adjustment in boys and non-sports activities (e.g., language, computers, music, church, etc.) benefitting girls. Using a longitudinal design, Metsäpelto et al. (2010) found an association between participation in a school-based EC programme in the first years of schooling and lower levels of internalizing problems, social anxiety and depressive symptoms in 9- to 10-year-olds in Finland. In this case, long-term engagement – and not necessarily type or number of activities – correlated with lower social anxiety scores. Similarly, Denault and Déry (2015) found that constant participation in organized EC activities predicted better social skills, and consequently, fewer conduct problems among elementary school-aged Canadian children. Taken together, these studies support the idea that prolonged participation in EC programmes may promote social and emotional skills in middle childhood.

In terms of types of EC activities, differences have been found in terms of collective versus individual sports, with participation in the former resulting in enhanced self-esteem (Slutzky and Simpkins 2009) and lower social anxiety (Dimech and Seiler 2011). In the music domain, results have been mixed. Some empirical studies have found effects of group music education on children's social and emotional development in areas such as social inclusion (e.g., Welch et al. 2014) and self-esteem (Costa-Giomi 2004),

while others have found none (Rickard et al. 2012). These contrasting results may be due to distinct conceptualizations of social and emotional skills and methodological issues. It was also difficult to contrast these findings as sports and music were not directly compared in the above-mentioned reports. Although studies comparing these two distinct types of EC activities exist, they have typically centred on areas such as motivational beliefs (Simpkins et al. 2010) or very specific skills such as mental rotation (Pietsch and Jansen 2012), not socio-emotional skills.

To complicate matters, few studies to date have focused on parental perceptions of children's social and emotional development in relationship to their participation in EC music and sports programmes. This is surprising, given the central role of parents in children's lives. As Bornstein suggested, 'how to care for children, how to rear them, how to apprentice them into culture' (1991: 17) are concerns of parents worldwide. Although the socialization of children is widespread, beliefs about and practices of child-rearing vary considerably across and within cultural groups (see Furedi 2002; Tamis-LeMonda et al. 2008). Socio-economic status (SES) is another important marker of parenting (Lareau 2011), with EC programmes often viewed as 'one example of classed parenting behaviours' (Vincent and Maxwell 2016: 270). Children from low SES usually participate less in EC activities than their more affluent peers (Metzger et al. 2009; Pew Research Center 2015), and little is known about their parents' perceptions of their participation, particularly in terms of social-emotional development. Yet, the consensus is that parents play a central role in children's EC programme participation in both music and sports (Ilari 2018; Brockman et al. 2009).

To address these issues, we used the Bioecological Model of Human Development (Bronfenbrenner and Morris 2006) as a main framework to examine parental views of children's participation in EC music and sports over the course of five years. According to the Bioecological Model, human development occurs through the intricate interplay between sources of support and stress in a child's life and the interactions between them. In other words, development relies on the interrelationships between four elements: *process* (i.e., 'a progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment' [Bronfenbrenner and Morris 2006: 996]), *person*, or the individual characteristics that individuals bring to social situations; *context*, or the influences from the micro, meso, exo and macrosystems; and *time*, or what happens 'in the moment' (micro-time), the consistency of activities and interactions or meso-time, and macro-time issues or the social/historical time and major life transitions. These four elements, process, person, context and time, are referred to as PPCT (Bronfenbrenner and Morris 2006).

We chose the Bioecological Model of Human Development as our theoretical lens due to its relevance for and applicability in community music. Aside from the emphasis on the PPCT element, this model is also built around specific definitions of environment and process:

Especially in its early phases, but also throughout the life course, human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring

1. This study is part of a larger effort, the USC Brain & Music Research Project (<https://dornsife.usc.edu/bci/brain-and-music/>).

forms of interaction in the immediate environment are referred to as proximal processes.

(Bronfenbrenner and Morris 2006: 797)

Proximal processes, in turn, are not only contextual, interactional and activity-dependent, but are also multidirectional in that there is a fair amount of reciprocity between individuals. Proximal processes are further associated with human interactions with cultural objects and symbols. Context, interaction, activity, repetition, reciprocity and interactions with cultural objects and symbols are also elements of community music (see Higgins 2012).

In this article, we report on a study of parental perceptions of socio-emotional skills in children who were involved in EC music and sports programmes and a group of children who were not involved in any intense EC programme.¹ As suggested in the Bioecological Model (Bronfenbrenner and Morris 2006), child development is influenced by environmental context, and so we asked parents to rate their perceptions of their own communities, particularly in terms of community violence. Bronfenbrenner and Morris also suggested that individual characteristics, such as personality, influence child development and so parents were invited to describe their children's personality.

METHOD

Participants

Eighty-nine 6- to 7-year-olds were recruited from public elementary schools and community music and sports programmes in the greater Los Angeles area to take part in a five-year longitudinal research project that chartered the effects of music on brain and child development (Habibi et al. 2018). Children were divided into three groups – music, sports, control – according to their EC participation. Children from all three groups came from equally underserved communities including primarily Latino families of Central and South Los Angeles. All children were being raised in bilingual households, attended English-speaking schools and spoke English fluently.

The music group included 29 children (eleven girls), who were about to begin their participation in an El Sistema-inspired programme known as Youth Orchestra of Los Angeles at Heart of Los Angeles or YOLA at HOLA (see description ahead). Children in this programme enrolled by lottery, up to a maximum of twenty per year, from a list of interested families. The sports group ($n=29$) included fifteen children (five girls) who were about to begin training in a community-based soccer programme and an additional fourteen children (seven girls) who were about to start group swim lessons (see below). None of these children were engaged in any intensive music programme. Children enrolled in all EC programmes on a 'first come, first served' basis. The control group included 31 children (thirteen girls). They were recruited from public schools in the same area of Los Angeles and were not involved in any systematic or intense EC programme of any kind.

Over the course of the five-year study, seven children (three in music, four in sports) discontinued participation in their respective programmes. Two children from the control group enrolled in systematic EC programmes in music and drama, respectively. Three music, six sport and eleven control children discontinued participation in the study due to time limitations or lack of interest. Seven music and one sport children relocated throughout the course of

the study. In addition, six children (two in music, three in sports, one control) and their parents did not complete the measures that were analysed for the purpose of this study and were not included in the final analysis. Therefore, the final sample included 46 children: fourteen music (mean age 78.4 months, $SD=5.2$), fifteen sports (mean age 79.0 months, $SD=7.7$) and seventeen controls (mean age 84.9 months, $SD=5.7$).

Given the importance of context in this study, we deemed it appropriate to offer a thorough description of the participating families and the communities where they lived and a description of the EC programmes before describing the research instruments and data collection procedures.

Contextual information: Study participants and their communities

Participating families lived in low socio-economic neighbourhoods in Central and South Los Angeles. Compared to the rest of the nation, the communities where most participants lived have lower incomes, larger household sizes, lower levels of education and a higher percentage of Latinos and residents born outside the United States. In addition, participants' communities had higher rates of community violence and limited access to healthcare services, healthy food and nearby adequate schools compared to the rest of Los Angeles.

The average median annual household income in zip codes where participants resided was \$33,868, roughly 39% less than the national median household income of \$55,322 (US Census Bureau 2016a). However, the average household income of families participating in this study, through self-measure Reports, was even lower, at approximately \$20,300. In the participants' communities, the percentage of individuals earning below the federal poverty guideline was 33.9%, which is roughly double the national average of 15.1% (US Census Bureau 2016b). This percentage was much larger among the families of the participants; 82% of participant families earned an income that was below the federal poverty guideline for their household size.

The average participant household size was 4.3, which was larger than the national average of 2.54 and larger than the average household size among Hispanic Americans of 3.25 (US Census Bureau 2017). This difference was partially due to some participants sharing a home with extended family members such as grandparents, aunts and uncles and cousins; 15 per cent of parents reported this to be the case.

In terms of educational attainment, in the neighbourhoods where participants resided, the highest level of education completed by adults was much lower than the national average. In these neighbourhoods, the percentage of adults who were high school graduates or greater was 61.8% compared to 87% nationwide (US Census Bureau 2016c). Parental educational attainment in our sample was also lower than the national average, with only 54% of parents holding at least a high school diploma. In addition, 8% of parents reported having less than a 6th-grade education or no formal education at all compared to only 0.7% of national respondents aged 30–49 years, the age bracket of most participant parents (US Census Bureau 2017).

Parental education levels also reflected their occupations, including many that did not require a high school diploma or a college degree. Almost half of the participating mothers were homemakers, with the other half split between working full-time and part-time. The top three occupations held by

participants' mothers in our study were housekeepers, child care providers and textile workers. Most fathers worked full-time, with a small number reporting that they worked part time or were disabled. The top three occupations held by participants' fathers were drivers, skilled construction workers and textile workers.

In terms of racial and ethnic makeup, participating families resided in neighbourhoods with high concentrations of residents who were born outside of the United States. On average, Latinos made up 65% of residents in participants' neighbourhoods, a number far higher than the national average of 18% (US Census Bureau 2016d). Unsurprisingly, 95% of our participants were of Latino ethnicity, with the remaining 5% being African American and Asian American (i.e., Koreans).

The EC programmes

Music: The Youth Orchestra Los Angeles at the Heart of Los Angeles (YOLA at HOLA) is an El Sistema-inspired community music programme that provides free intensive music education in an underserved area of the city. The programme is spearheaded by the Los Angeles Philharmonic in partnership with the Heart of Los Angeles, a non-profit organization that provides youth with academic and EC programmes (Heart of Los Angeles 2017). Children met five times per week for a total of six–seven hours of orchestral rehearsals, sectionals, theory class and homework tutoring, with occasional performances and other events (see Ilari et al 2016).

Parents in our study offered different reasons for enrolling their children in the music programme. These ranged from children's interest in music, beliefs that music may promote personal development and social reasons (i.e., 'a neighbour told me about it'; or influence of a sibling who was already attending the programme). Some parents played instruments and wanted their children to join them in musical activities, such as one father, who wanted his child to join him in playing music at church. YOLA at HOLA was also seen as an opportunity for children to develop musical skills and later connect with their family through music.

Parental involvement was highly encouraged at YOLA, with many parents volunteering their time by helping at sponsored events such as the annual holiday party. In addition, the programme staff made a concerted effort to get to know the students' families through parent meetings and family events aside from the musical performances. Although most parents did not have any formal musical education, the majority reported that they helped (63 per cent) their children by encouraging and promoting instrumental practice at home.

Sports: The sports group included children from a community soccer programme and a community swimming programme, both of which designed to serve disadvantaged families in South Los Angeles. The community soccer programme was free at the beginning, but after two years, began to charge a small participation fee, while the swimming programme was free of charge throughout the five years of the study. Although all participants started out in one of the two programmes, a few switched to other programmes over time due to a loss of interest in the sport modality or difficulty in paying programme fees.

The soccer programme was affiliated with a large national organization that uses soccer as a vehicle for social change, providing a safe space for play,

nutrition education and mentorship. The programme took place three times a week for one hour each, with a one-hour game each weekend. Each child received a soccer ball, uniform and information about nutrition and health upon joining. Practice sessions involved warm-up cheers, soccer skill training in small groups, simulated games to practice their skills in context and a 'cool down' period where the coach-mentors encouraged teamwork. The programme aimed to emphasize sportsmanship over competition, and encouraged parent and community involvement.

The swimming programme was held at a local YMCA and was also affiliated with a larger national organization. Swimming instruction was given twice a week for one hour, with recreational activities and competitions on weekends. Practice involved breaking up into small groups and focused on swimming skills such as stroke development, endurance and fitness. The programme emphasized sportsmanship and safety around water, and held educational sessions on nutrition and well-being. Like YOLA, the swimming programme offered homework help as well, although it was not systematic.

When asked, most parents stated that they enrolled their children in the sports programmes due to a desire to make them more active and to maintain a healthy weight. While some parents recognized the value of developing athletic skills and hobbies, others believed that sports could benefit their children beyond their physical health, such as through benefiting their academics or helping them relax and be less hyperactive at home. Unlike at YOLA, parents in the sports group did not volunteer their time in the programmes, playing less involved roles.

Materials and procedures

Parents were asked to complete four measures: (1) the Behavioural and Emotional Screening System (Kamphaus and Reynolds 2007), (2) the Ten-Item Personality Inventory (Goslin et al. 2003), (3) the Community Violence measure (Richter and Saltzman 1990) and (4) the Family History Interview. They responded to each measure at different times during the five-year study. Most measures were administered at the beginning of the study or at baseline, and after one, two, three or four years of participation in the programmes (henceforth Y1, Y2, Y3, Y4).

Behavioural and emotional screening system (BASC-2 BESS): The main instrument used in this study was the BESS, a measure from the BASC-2 family. This brief measure is used to evaluate children's behavioural and emotional strengths and weaknesses (Kamphaus and Reynolds 2007). Items in the BESS measure the main constructs of adjustment, namely, internalizing problems, externalizing problems, school problems and adaptive skills (see Stiffler and Dever 2015). The BESS consists of three forms to be completed by teachers, parents and students (parent and teacher forms can be completed for children ages 5 and up; student forms can be completed by children ages 8 and up), and is available in English and Spanish. For this study, we used the parent and student forms, each containing 30 items. Respondents were asked to rate each item based on a four-point scale--never, sometimes, often or almost always. The sum of these items was converted into a T-score, with higher scores indicating greater risk or problems (Kamphaus and Reynolds 2007). Aside from a composite score, the BESS includes several subscales. In this study, we focused on four subscales that are common to both the parent and student forms: Anxiety (e.g., 'Worries about things that cannot be changed'),

Attention Problems (e.g., 'Has trouble concentrating'), Depression (e.g., 'Says, nobody likes me') and Hyperactivity (e.g., 'Disrupts other children's activities'). We also looked at the Aggression subscale (e.g., 'Defies people in authority'), which was present on the parent form but not the student form, because previous studies have suggested that participation in EC programmes in childhood (e.g., sports) may be associated with the reduction of aggressive behaviours in children (Piché et al. 2015).

Parents completed the BESS at the beginning of the study (hereinafter, baseline) and at Years 3 and 4. Students completed the BESS on Years 2, 3 and 4, starting on Y2, when all were at the minimum age stipulated by the test developers (Kamphaus and Reynolds 2007). Completion of this measure took approximately five minutes. Data were scored using the age scales devised in the BESS manual (Kamphaus and Reynolds 2007).

Ten-item personality inventory (TIPI): The TIPI is a brief, ten-item measure of the big five personality traits (extraversion, agreeableness, emotional stability, conscientiousness and openness to new experiences) developed by Goslin et al. (2003). Parents completed the measure for their child during Years 3 and 4. Data were scored according to the norms stipulated by the TIPI developers.

Community violence measure: An eighteen-item measure modelled after the Survey of Children's Exposure to Community Violence (Richters and Saltzman 1990) was used to examine parental perceptions of their communities. The original measure includes questions about victimization, witnessing and hearing about acts of community violence. The modified version used for this study included twelve questions about witnessing experiences (e.g., 'seeing someone being arrested') and witnessing acts of community violence (e.g., 'seeing someone beating up another person'). However, questions about victimization and hearing about acts of community violence were not included in the modified version of the questionnaire. Parents responded as a proxy for their child and reported on the frequency with which their child witnessed each event in the past year on a 4-point scale ranging from 0 (never) to 3 (more than twice). The measure also included questions about sense of safety (e.g., 'how safe would you say your child's school is?'), which parents responded to on a 3-point scale from 1 ('not as safe as others') to 3 ('safer than others'). Parents completed the questionnaire on Y1, Y2 and Y3 of the study. This measure was available in Spanish and English.

Family history interview: A family history interview, consisting of structured questions (multiple-choice and open-ended), was used to gather information on six main areas of the child's life, namely, (1) demographics and family life; (2) medical information (for the purpose of brain imaging); (3) language information; (4) schooling; (5) leisure and EC activities; and (6) the child's interests in music, sports and other activities. The interview took approximately 30 minutes, and was available in English, Spanish and Korean. Parents were interviewed every year of the study. For the current study, interview data were used solely to offer a contextualization of children's backgrounds and EC programme participation. A detailed analysis of the interview data will be presented in a separate report. Brain imaging data are also reported elsewhere (e.g., Habibi et al 2018).

RESULTS

Means and standard deviations for all measures are presented in Table 1. As noted, the BESS was administered to parents at baseline, Years 3 and 4

and to children at Years 2, 3 and 4. We analysed the composite scores for all three groups in all years (see Figure 1) using repeated-measures ANOVA. In terms of parental composite scores for the BESS (Figure 2), a repeated-measures ANOVA indicated that there were no significant group or year effects, and no group by year interaction. For children's BESS composite scores (Figure 3), a repeated-measures ANOVA indicated that there was a significant effect of year ($F [2,86]=19.66, p<0.05, \eta^2=0.12$), with all children scoring lower over time (see Figure 2): Y2 vs Y3 ($p<0.05$); Y2 vs Y4 ($p<0.05$); Y3 vs Y4 ($p<0.05$). There were no significant group effects or group-by-year interaction.

In terms of the subscales of the BESS – parental form, a repeated-measures ANOVA indicated that there were significant differences in the aggression and hyperactivity subscales and no differences for the remaining three subscales (i.e., anxiety, attention problems and depression). For the aggression subscale, there was a significant group-by-year interaction ($F [4,86]=2.92, p<0.05, \eta^2=0.04$). Tukey post-hoc tests revealed a significant difference between control and music ($p<0.05$) and control and sport ($p<0.05$) in year 3, with control parents rating their children higher in aggression than both music and sport parents at year 3. There was a trend towards a significant group effect ($F [2,43]=2.45, p=0.09$), with control parents rating their children higher in aggression than sports parents ($p=0.06$), but no trend towards a difference between music and the other two groups. Finally, there was no significant year effect for the aggression subscale. A significant group-by-year interaction ($F [4, 86]=2.85, p<0.05, \eta^2=0.03$) was found for the hyperactivity subscale (see Figure 3). Tukey post-hoc tests revealed a significant difference between control and music ($p<0.05$) in year 4, with music parents rating their children lower in hyperactivity than control parents. Yet there were no group or year effects for the hyperactivity subscale. In terms of the anxiety, attention problems and depression subscales, there was no significant group or year effect, or group-by-year interaction.

For the subscales of the BESS – child form, a significant year effect was found for the anxiety subscale ($F [2,86]=12.14, p<0.05, \eta^2=0.12$), with post-hoc tests suggesting that children scored higher on Y2 than Y3 ($p<0.05$) and higher on Y2 than Y4 ($p<0.05$), but no differences were found in scores between Y3 and Y4. No significant group effects or group-by-year interactions were found for the anxiety subscale. A significant year effect was found for the depression subscale ($F [2, 86]=15.33, p<0.05, \eta^2=0.13$), with children scoring higher on Y2 than Y4 ($p<0.05$) and Y3 than Y4 ($p<0.05$), and a trend towards significance between Y2 and Y3 ($p=0.09$). However, no group effects or group-by-year interactions were found for the depression subscale. For the attention problems subscale, there were no group effects, no year effects or group-by-year interaction. Finally, in terms of the hyperactivity subscale there was no group and no year effects, nor group-by-year interaction.

For the community violence measure, a repeated-measures ANOVA revealed that there was a significant group effect for sense of safety ($F [2,43]=3.57, p<0.05, \eta^2=0.07$), with sports reporting significantly lower sense of safety than music ($p<0.05$). No differences in sense of safety scores were found between music and or between sports and control. No year effects or group-by-year interactions were found for sense of safety. There was also a group-by-year interaction for exposure to violence ($F [4,86]=2.71, p<0.05, \eta^2=0.03$).

BASC-2 Behavioural and Emotional Screening System (BESS)

Parent BESS		Music	Sport	Control
	Baseline	45.21 (9.76)	42.93 (9.49)	46.82 (8.80)
	Year 3	44.50 (8.23)	41.47 (7.42)	48.76 (13.50)
	Year 4	44.79 (8.41)	43.40 (14.36)	52.47 (13.08)
Aggression - Parent		Music	Sport	Control
	Baseline	1.79 (1.67)	0.87 (1.25)	1.41 (1.00)
	Year 3	0.64 (0.84)	0.67 (1.11)	1.94 (1.92)
	Year 4	0.93 (1.14)	1.07 (1.83)	1.94 (1.82)
Anxiety - Parent		Music	Sport	Control
	Baseline	3.00 (2.22)	2.13 (1.68)	3.06 (2.05)
	Year 3	2.71 (2.23)	2.73 (2.37)	3.94 (2.16)
	Year 4	3.93 (2.06)	2.40 (1.80)	3.79 (2.17)
Attention Problems - Parent		Music	Sport	Control
	Baseline	2.79 (2.19)	2.67 (2.23)	3.06 (2.36)
	Year 3	3.29 (1.59)	2.33 (1.84)	3.18 (2.70)
	Year 4	2.93 (2.23)	2.13 (2.53)	3.94 (3.33)
Depression - Parent		Music	Sport	Control
	Baseline	3.00 (2.18)	2.20 (2.31)	3.41 (1.84)
	Year 3	2.50 (2.31)	1.80 (2.51)	3.12 (2.85)
	Year 4	2.43 (2.14)	1.93 (2.22)	3.35 (2.94)
Hyperactivity - Parent		Music	Sport	Control
	Baseline	1.00 (1.30)	1.07 (0.88)	1.00 (1.17)
	Year 3	0.64 (0.93)	0.47 (0.64)	1.29 (1.29)
	Year 4	0.29 (0.83)	0.73 (1.53)	1.47 (1.42)
Student BESS		Music	Sport	Control
	Year 2	55.64 (8.79)	61.13 (10.51)	58.12 (8.79)
	Year 3	52.79 (7.34)	55.67 (10.59)	55.47 (11.59)
	Year 4	49.86 (8.92)	49.27 (8.50)	51.35 (7.57)
Anxiety - Student		Music	Sport	Control
	Year 2	2.64 (1.98)	3.80 (1.82)	3.82 (1.55)
	Year 3	2.07 (1.73)	2.80 (1.78)	2.35 (1.80)
	Year 4	2.29 (1.54)	1.60 (1.59)	2.12 (1.58)
Depression - Student		Music	Sport	Control
	Year 2	1.21 (1.37)	1.20 (1.21)	1.41 (1.28)
	Year 3	0.57 (0.94)	1.00 (1.31)	1.12 (1.32)
	Year 4	0.36 (0.63)	0.13 (0.52)	0.35 (0.61)
Attention Problems - Student		Music	Sport	Control
	Year 2	1.71 (1.38)	1.93 (1.79)	1.94 (1.71)
	Year 3	1.86 (1.88)	1.27 (1.33)	1.76 (1.52)
	Year 4	1.57 (1.40)	1.27 (1.22)	1.71 (1.69)

Hyperactivity - Student	Music	Sport	Control
Year 2	4.00 (2.99)	4.53 (2.45)	3.65 (2.67)
Year 3	4.14 (2.57)	4.00 (3.32)	3.53 (3.16)
Year 4	3.50 (1.95)	3.07 (1.98)	3.76 (2.75)

<i>Ten Item Personality Inventory (TIPI)</i>			
Extraversion	Music	Sport	Control
Year 3	5.36 (1.38)	4.77 (1.43)	5.06 (1.40)
Year 4	4.46 (1.31)	5.07 (1.05)	4.76 (1.11)

Agreeableness	Music	Sport	Control
Year 3	5.71 (1.14)	5.33 (1.13)	5.44 (1.49)
Year 4	5.64 (1.26)	5.63 (1.36)	4.94 (1.45)

Emotional Stability	Music	Sport	Control
Year 3	5.68 (1.23)	5.80 (1.18)	4.29 (1.78)
Year 4	5.39 (1.32)	5.77 (1.39)	3.91 (1.84)

Conscientiousness	Music	Sport	Control
Year 3	4.71 (1.16)	4.80 (1.21)	4.41 (1.65)
Year 4	4.11 (1.18)	4.17 (1.83)	4.12 (1.53)

Openness to new experiences	Music	Sport	Control
Year 3	5.68 (1.17)	5.93 (1.25)	5.44 (1.27)
Year 4	5.61 (1.18)	5.90 (1.33)	5.00 (1.36)

<i>Community Violence Questionnaire</i>			
Exposures	Music	Sport	Control
Year 2	1.07 (1.21)	2.47 (2.47)	0.71 (1.40)
Year 3	2.36 (3.13)	1.27 (2.05)	1.29 (2.66)
Year 4	1.64 (2.27)	2.67 (3.13)	1.59 (2.12)

Sense of Safety	Music	Sport	Control
Year 2	4.21 (1.25)	3.73 (0.96)	4.24 (1.09)
Year 3	4.36 (1.08)	3.47 (1.19)	4.12 (0.60)
Year 4	4.14 (1.03)	3.53 (1.13)	3.82 (0.81)

Table 1: Means and SD for all measures, in all years.

squared=0.03). Tukey post-hoc tests revealed a significant difference between control and sport ($p<0.05$) during year 2, with sport parents reporting higher community violence exposure than control parents. No main effects of group or year were found for community violence exposures. We also calculated correlations between the community violence measures and the parent BESS scores and none were significant.

In terms of the TIPI, there was only a significant difference in the emotional stability subscale and no significant differences for the rest of the subscales

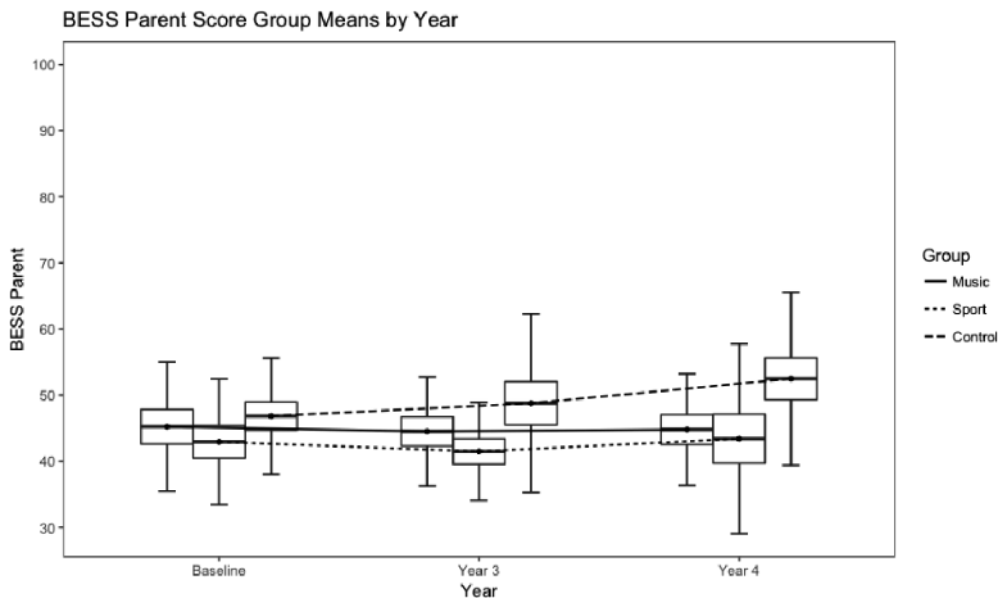


Figure 1: Parents' BESS scores (composite) over time (baseline, Y3, Y4).

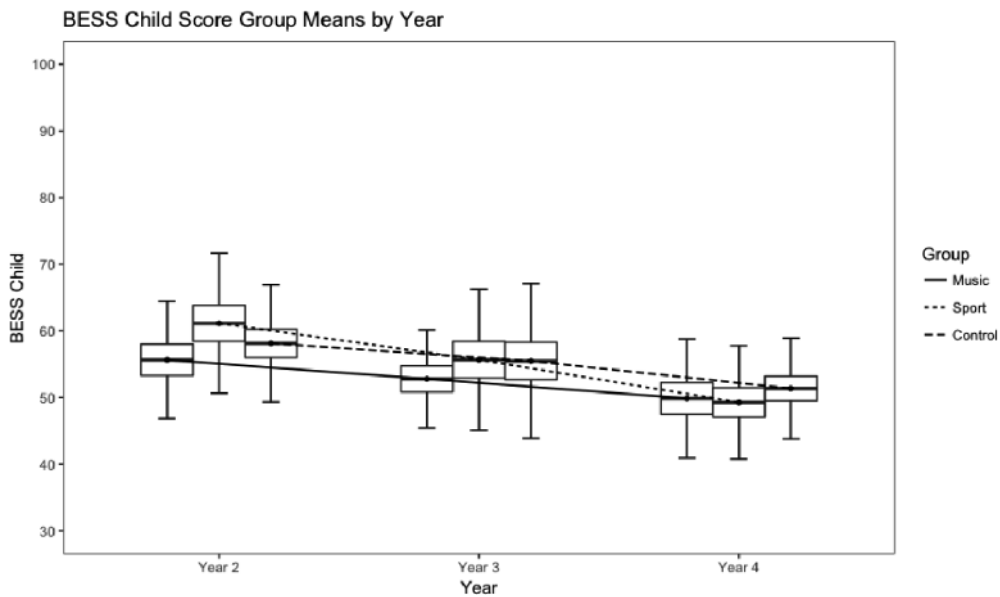


Figure 2: Children's BESS scores (composite) over time (Y2, Y3, Y4).

(Figure 4). For emotional stability, there was a significant group effect ($F(2,43)=7.81, p<0.05, \eta^2=0.21$), but no year effect and no group-by-year interaction. Post-hoc analyses indicated that these group differences were due to controls scoring lower than sports ($p<0.05$) and controls also scoring lower than music ($p<0.05$), and no difference between music and

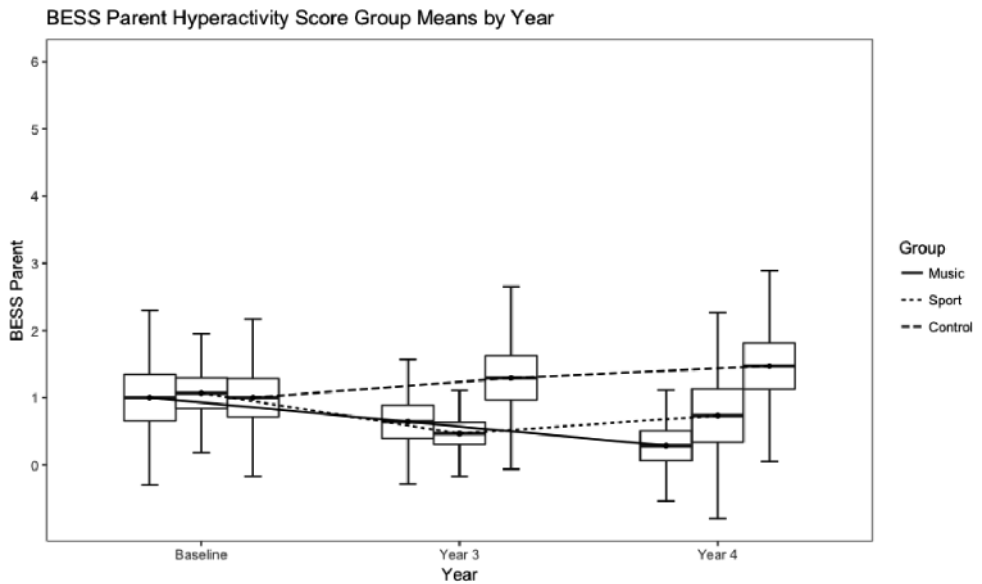


Figure 3: Parents' BESS scores - hyperactivity subscale over time (baseline, Y3, Y4).

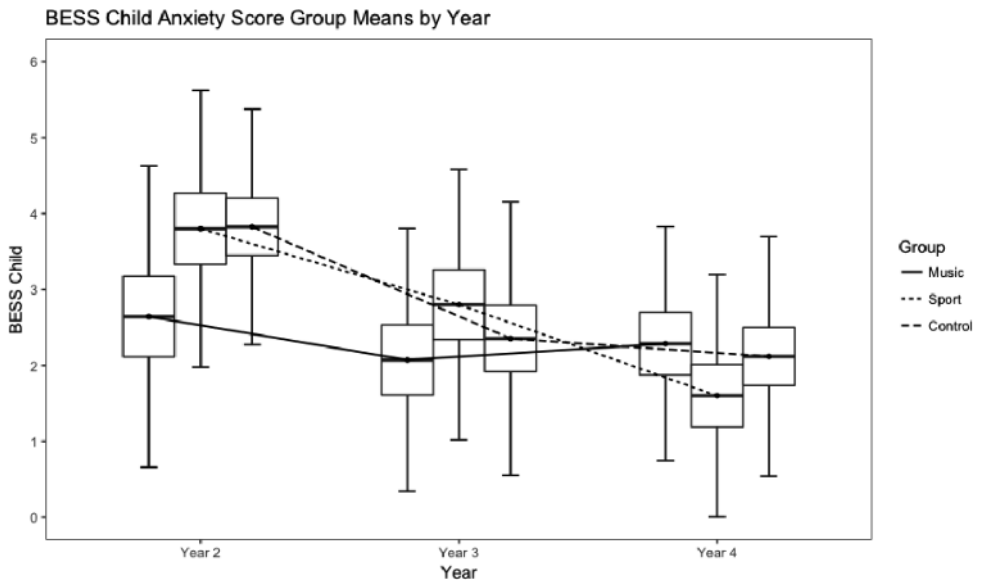


Figure 4: Children's BESS scores - anxiety subscale over time (Y2, Y3, Y4).

sports scores, as depicted in Figure 3. In terms of the extraversion scores, there was no significant group or year effect. Yet, the group by year interaction was trending towards significance ($F[2,43]=3.05, p=0.06, \eta^2=0.03$). Finally, in terms of the conscientiousness, agreeableness and openness scores, there was no significant group or year effect and no group-by-year interaction.

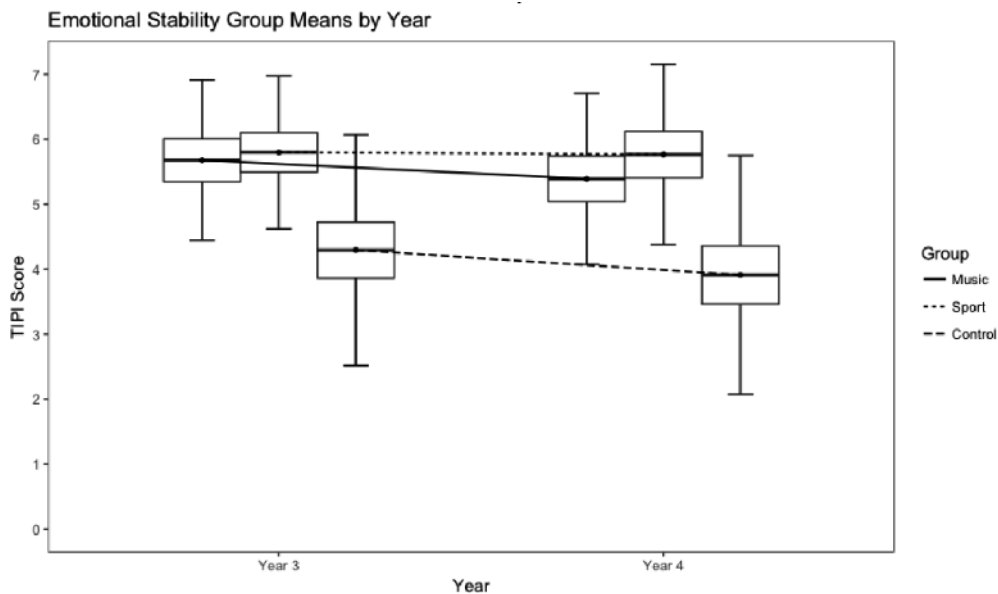


Figure 5: TIPI for emotional stability.

DISCUSSION

Using the Bioecological Model of Human Development (Bronfenbrenner and Morris 2006) as our theoretical lens in this study, we examined parental perceptions of socio-emotional skills in children who were involved in EC music and sports programmes and a group of children who were not. We also asked parents to rate their own communities in terms of violence and to describe their children's personality using the TIPI. Three main findings emerged from our data. First and foremost, it was clear that participation in EC programmes impacted parental perceptions of their children's socio-emotional skills, more specifically, in relationship to aggression and hyperactivity. Children who were not involved in any EC programmes (i.e., controls) received higher ratings for these subscales than their peers in music and sports from their parents, suggesting that, at least from the perspective of their parents, they are more at risk in those areas than their peers. These findings are consistent with earlier research that found socio-emotional benefits associated with long-term participation in EC programmes during middle childhood (e.g., Denault and Déry 2015; Posner and Vandell 1999; Metsäpelto et al. 2010). At least from the perspectives of parents, the EC music and sports programmes had a protective effect, as seen in their ratings of children's aggression and hyperactivity on the BESS subscales. These findings, allied with the lack of differences in parental perceptions of children's aggression and hyperactivity at the beginning of the study (i.e., before children enrolled in their respective EC programmes), suggest that the programmes may have produced some positive socio-emotional effects.

A second interesting finding relates to children's overall responses to the BESS. Child participants from all three groups scored lower in the children's

composite scores (see Figure 2), with depression and anxiety scores achieving the level of significance for year effects. This pattern of response can be interpreted in at least two ways. First, it is possible that the children who were participating in our study had developed both the vocabulary to understand the questions and a more acute self-awareness over time, which resulted in a more positive view of the self. Alternatively, it is also possible that these results may represent a combination of learning effects due to repeated testing and social desirability (i.e., when respondents answer questions in a way that they perceive as being more socially acceptable, projecting a favourable image of themselves). Recall that parents completed the BESS at baseline, and then again at Y3 and Y4. Children, in turn, completed the BESS at Y2, Y3 and Y4, with no breaks in between. It is possible, then, that the timing of the tests influenced their responses. It is also noteworthy that children's responses to the BESS were quite distinct from those of their parents. Group effects (for anxiety and hyperactivity) emerged only in the responses of parents whose children were participating in EC programmes. This finding is consistent with early research suggesting that parents and children often reason differently about research questions, basing their answers on different experiences, or interpreting items in a self-report measure in different ways (e.g., Davis et al. 2007). This study alone cannot pinpoint the strategies used by parents and children when answering question, nor determine such strategies could explain the discrepancies between their responses. Still, our findings support the idea that future research needs to gather responses from multiple actors – parents, children themselves, teachers and facilitators, community members – to get a more accurate picture of children's participation in EC programmes.

A third interesting finding refers to parental ratings of children's emotional stability through the TIPI. Once again, there was a significant difference between parental ratings for controls, who received lower ratings than their peers in sports and music. This finding calls for speculation. On the one hand, and consistent with earlier research, this finding could be related to the association between long-term participation in EC activities and children's socio-emotional development (e.g., Denault and Dèry 2015; Molinuevo et al 2010). It is also consistent with the maturity principle (e.g., Soto and Tackett 2015), which suggests that some personality traits such as emotional stability become more robust in people as they age. Thus, it is possible that these ratings are associated with emotional gains from the programmes. Yet, a word of caution is needed here as this study did not incorporate a random-assignment design. We also did not collect personality data at the onset of the study. Therefore, it is not possible to state that participation in EC activities caused changes to children's emotional stability. Also, we cannot rule out the possibility that children who had higher emotional stability to begin with were also more likely to enrol in EC music and sports. These are questions for future research to answer.

In terms of parental perceptions of community violence, it was interesting that parents in the sports group reported more negative comments about their communities than those in the music group. Geographically, families in the sports groups were mainly situated in South Los Angeles, whereas families in the music and control groups were located in both South Los Angeles and in the adjacent Rampart District. Although these districts are very close in proximity, they are quite distinct and have different histories. According to the Los Angeles Times newspaper (Chang and Lau 2016), the year 2014 marked the onset of an upsurge in crime in the city, particularly in South Los Angeles, with October being the worst month in terms of homicides. Coincidentally, it

was during the Fall of that year that many parents completed the BESS and the community violence measures. This might explain why, in their responses, sport parents reported higher vandalism, drug usage, prostitution, hearing police sirens and helicopters often, and learning about nearby shooting incidents from neighbours, all of which may have contributed towards their overall lower sense of safety in their communities. In contrast, parents in the music and control groups generally reported fewer negative incidents in their neighbourhoods.

CONCLUDING REMARKS AND IMPLICATIONS

The aim of our study was to examine perceptions of children's socio-emotional skills, personality and community violence in families whose children were attending systematic EC music and sports programmes in underserved communities of Los Angeles using the Bioecological Model of Human Development (Bronfenbrenner and Morris 2006) as the theoretical lens. Because parents and children may have different perceptions of the events around them, we also asked children to complete self-reports of their socio-emotional skills. Parents held the perception that children who attended regular EC music and sports programmes in their communities were less aggressive and hyperactive, and showed more emotional stability over time than children who did not attend any such programmes. These findings are not only consistent with the existing literature on the potential benefits of EC programmes for children's development and well-being, but are also in line with Bronfenbrenner and Morris' (2006) theorizing. According to them, development occurs by means of an intricate interplay between the interactions of process, person, context and time or PPCT. The EC programmes were social in nature and emphasized group work and team spirit, which influenced and were influenced by all four PPCT factors. For example, the consistency of activities and interactions with persons, objects and symbols generated through active participation in the programmes over time likely influenced children's relationships at the micro- and mesosystem levels and strengthened their individual characteristics. Long-term participation in these highly social EC programmes likely provided children opportunities to challenge their own ways of being in the world, and probably granted them with social-emotional resources whilst developing skills in sports or music.

The discrepancies between parental and children's self-reports of socio-emotional skills that we found, which are also consistent with earlier research, may be associated with development during middle childhood, which is a period of rapid development. As Bosacki suggested, social experiences in middle childhood 'provide children with an opportunity to co-create different selves through their interactions with their peers, parents, and teachers' (2015: 177). While we interpret these contrasting perceptions in a positive light, we are also aware that some caution is needed in the comparisons between parents' and children's responses to the BESS as data were collected at different (baseline for parents, Y2 for children) and similar times (i.e., Y3 and Y4). Another limitation of our study was the relatively small sample size as some children discontinued their participation in the study or in their EC programmes or did not complete all measures.

Still, our study findings suggest that extended participation in community-based EC programmes may impact children, families and consequently, their

communities, in positive ways. These findings converge with those from earlier studies by scholars in community music, who tend to employ different research paradigms and methods than the ones used here (e.g., Iadeluca and Sangiorgio 2009; Rimmer 2012), and different constructs, theories and theoretical frameworks (e.g., Derrida's 'Acts of Hospitality', see Higgins 2012). Here we focus on the latter. To our knowledge, the works of Urie Bronfenbrenner (including the Bioecological Model; Bronfenbrenner and Morris 2006) have not been typically used to frame studies in community music. Yet, we believe that they could be useful to community music scholars, particularly those who are interested in studying children's experiences.

As noted in the beginning of this article, the central tenets of community music (Higgins 2012) overlap with some key aspects of the Bioecological Model of Bronfenbrenner and Morris (2006). These include the central role of context, human interactions in and through music, the important role of activities and where possible their consistency through repetition, issues of reciprocity and opportunities to engage with cultural objects and symbols. But this is not to say that there are no variations in terms of how these key aspects are enacted in community music and in Bronfenbrenner and Morris' theorizing. For example, while Bronfenbrenner and Morris emphasize stability and change, which are central to any theory or model of human development, community musicians, in turn, often focus on the agentic and socio-political dimensions that stem from human interactions with cultural objects and symbols that are afforded through musical experiences and participants' agency and voice. Although these variations could be viewed in a negative light (i.e., as illustrations of insurmountable disciplinary boundaries), we actually see them as strengths, as opportunities to reflect on the impact of community-based musical activities from different entry points and across disciplines. That is, the Bioecological Model (Bronfenbrenner and Morris 2006) might offer support to community music researchers as they go about discussing the impact of activities and programmes for individuals, families and communities alike.

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