



# Making a Joyful Noise: The Potential Role of Music Making in the Well-Being of Young Families

A Report to the Bernard van Leer Foundation

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A photograph of a group of children and an adult. In the foreground, a young boy with a wide, joyful smile is wearing a blue and white striped polo shirt with a small flag emblem on the chest. Behind him, another boy in a white shirt is looking down. To the left, a boy in a white shirt and a pink cap with the word 'Hello' on it is smiling. In the background, a woman in a white tank top is also smiling. The scene is bright and cheerful, suggesting a social or educational activity.

# Overview: Music Matters

This paper explores the role that music might play in building a world in which young families thrive. At its heart is this idea: music matters because it fosters relationships, exercises a range of emotions, builds expressive skills including language, sparks learning, and preserves and celebrates cultural heritage and a sense of belonging. It works across people, activities, and settings, offering a promising, and too often underused, resource for mutual ties and human development.

*Photo credit: Mi -Pham on Unsplash*

# Framing the Issues: Music, Families, and Well-being

*In their first five years, children’s physical, neurological, social-emotional, cognitive, and expressive growth unfolds more rapidly than at any other time in their lifespans. However, there are as many as 200 million children worldwide who fail to thrive in these years, with lifelong consequences for their lives, their families, and for the societies in which they, in turn, become adults and parents (Grantham-McGregor et al., 2007; UNICEF, 2019). In this remarkable, but vulnerable, process, music can be an immediate, low-cost, high-impact resource available to families in homes, tents, temporary shelters, and even as they migrate.*

## Music

We focus on music because it is a universal, portable carrier of personal and cultural meaning, capable of expressing feelings and memories, full of opportunities for creation and innovation, either solo or ensemble. In addition, music underscores that well-being is mutual, not individual. A mother and father who know their family is safe have the energy to play and be delighted. A child eased into sleep with a lullaby lets his parents rest and rewards his grandmother who saved and transported those words and melody from another life. An older brother dancing with his father and laughing baby sister learns how to be exuberant and tender.

Throughout this paper, we define music broadly to include spontaneous and informal activities, and traditional and indigenous musics, in addition to what plays on the radio or in concert halls.

We include:

- Vocal activity, from humming to chanting to singing to organized choirs,
- Instrumental activity, from the slapping, banging, and thumping of body percussion to playing an instrument, and
- Movement, from clapping and stomping to social and artistic dancing.



Photo credit: Palaver Strings



We emphasize that music making includes:

- Social encounters where people relate to one another in a shared time and space,
- Activities by all members of families, all in their own individual ways: babies gurgling, fathers singing, a grandfather playing guitar,
- Embodied and shared emotion and expression, and
- The different languages and traditions that a family brings together – one possible way to have your history and culture always with you.

Throughout, we look at music making not as something rare and apart, but as an integral part of how humans interact, delight in one another’s presence, and learn to understand one another’s lives (Small, 1998).

## Families

Governments and organizations across the world are making a concerted effort to identify every support that could nurture what we know to be the greatest resource for the full development of young children: their families. Throughout this essay, when we say “family,” we are speaking of a wide network of relationships, stretching beyond the assumed mother-child pair. We imagine grandparents with traditional songs, brothers and sisters making up games and rhymes, aunts and uncles who bring new music and dance steps from their travels back home to family gatherings, as well as guardians who step in as caregivers and music-makers.

## Well-being

Even as we address the immediate and pressing issues of young families’ safety, health, nutrition, and school readiness, it is just as vital to ensure their broader well-being, which includes their joy, resilience, hope, and imagination as individuals and as family and community members. As a result, in this paper we ask whether music can play a role in helping:

- Children and their caregivers to bond intimately with a wide network of family members who will catch them when they fall, both literally and as life challenges them,
- Children to grow up equal and respected, learning to extend the same opportunities to others,
- Communities to create public spaces and housing where it is safe to play and explore, interact with others, and exercise their imaginations,
- Governments and NGOs to build childcare and learning programs where all children can act, choose, plan, make, and learn regardless of their gender, class, religion, or language, and
- Artists, composers, theaters, and concert halls to perform and nurture the many musical traditions that have roots in a community.



# What We Know: How Music Contributes to Young Families

There is a growing body of evidence that musical activity can contribute to many aspects of early human development from cognitive skills to fine motor development. In this review, we have concentrated on four domains where there is initial evidence that everyday music making can engage multiple family members in their children’s growth by:

- Creating a strong network of human relationships,
- Fostering social-emotional growth for understanding self and other,
- Developing language and expressive capacities, and
- Sparking curiosity and learning.

In these same domains, we explore how music may buffer families from pain and hardship by:

- Negotiating health and developmental challenges (e.g., helping premature and hard-to-soothe babies establish stable bio-rhythms or building alternative channels of communication with children on the autism spectrum),
- Addressing stress and depression in parents’ lives (e.g., restoring energy and pleasure for mothers suffering post-natal depression),
- Engaging fathers and other family members in bonding and childcare, building gender equity (e.g., encouraging both brothers and sisters to sing and play with their younger siblings; giving fathers fun and boisterous ways of enjoying their youngest children),
- Creating habits of playful interaction and mutual delight (e.g., strategies for soothing and defusing, and for smooth transitions into sleep that diminish frustration, harsh discipline, or even abuse), and
- Helping families comfort one another when they are caught up in uncertainties and losses (e.g., epidemics, natural disasters, incarceration, displacement, immigration, and war).





Reviewing research from these domains, we examine how the sound worlds of young children and families develop throughout their early years:

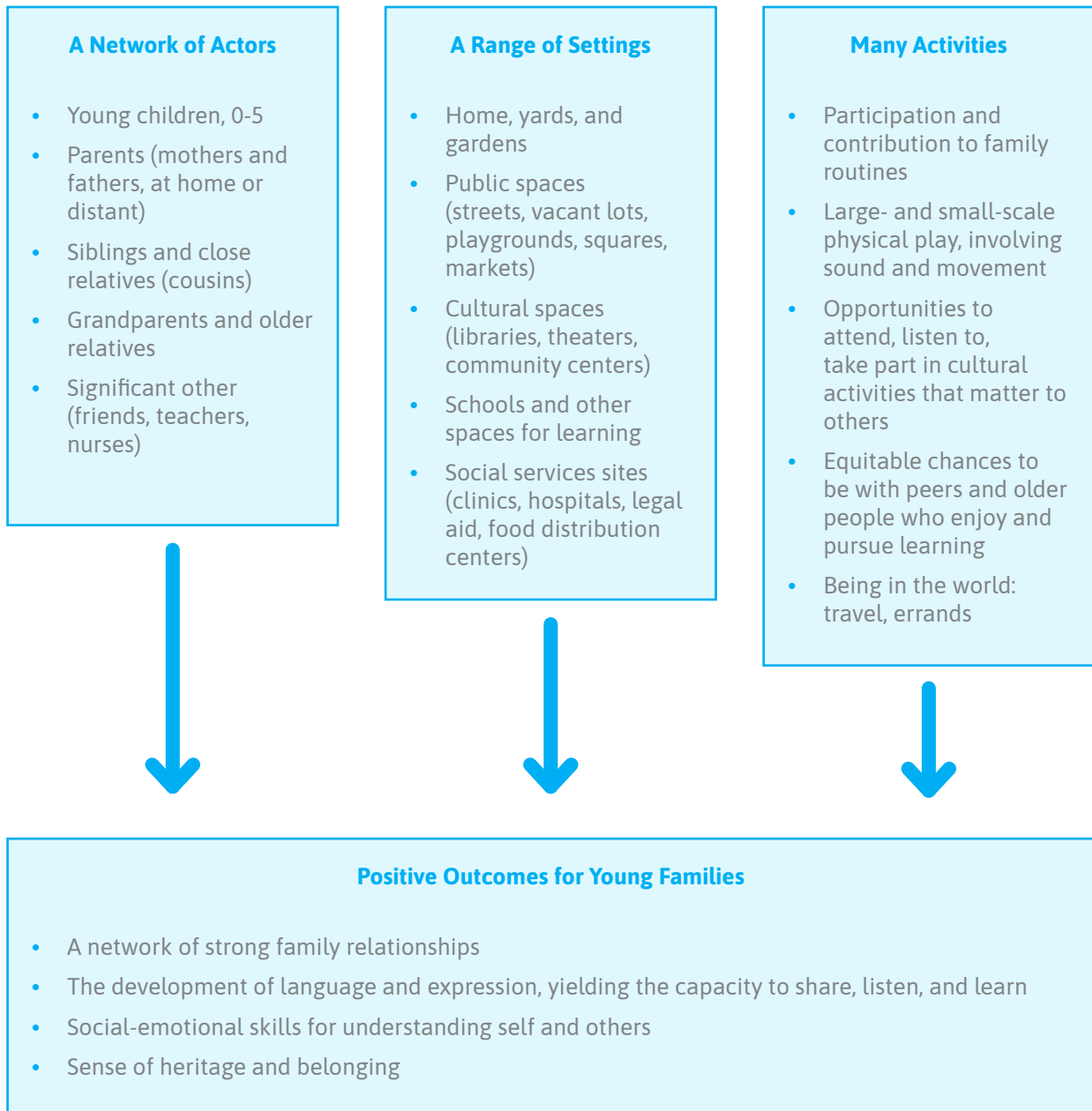
Developmental Period	What Music Can Contribute
<p><b>The Pre- and Perinatal Period:</b>            Even in these earliest months, families can create a rich sound environment for infants, laying the groundwork for music making, singing, listening and performing. Music can:</p>	<ul style="list-style-type: none"> <li>• Enhance early vocal exchanges that lead to babies’ auditory familiarity with and response to their caregivers’ voices</li> <li>• Strengthen opportunities for early bonding across a network of caregivers, including fathers</li> <li>• Develop a set of family routines for modulating stress and state transitions in infants through the distinctive, proto-musical qualities of parents’ vocalizations</li> <li>• Capture small moments of infant attention using sounds, laying the foundation for later music and language</li> </ul>
<p><b>Young Infants: Months 2–5:</b>            As infants’ attention and sleep patterns mature, music making can become more interactive. In this newly mutual world, musical possibilities include:</p>	<ul style="list-style-type: none"> <li>• Support caregivers’ confidence and well-being, creating interactive social situations that buffer them and their children from the effects of isolation and depression</li> <li>• Help to establish routines, like soothing rituals, feeding schedules, regular naps, and bedtimes, that contribute to all family members’ well-being</li> <li>• Practice a widening repertoire of human sounds (cooing, laughing, early syllables) that lay the groundwork for communication and language development</li> <li>• Introduce babies to the kinds of vocal play characteristic of their home culture</li> </ul>
<p><b>Older Infants: Months 6–12:</b>            In this period, babies engage in more complex social routines and games that create joint attention between partners. Babies also become physical explorers: watching, reaching, grabbing, and crawling. Given these new capacities, musical activity can become a way to:</p>	<ul style="list-style-type: none"> <li>• Enhance specific relationships to individual caregivers through games where turns are marked by sounds and singing</li> <li>• Give a wide range of partners engaging ways to interact with and be delighted by infants</li> <li>• Create sound-filled environments that foster exploring and understanding the physical world (e.g., grabbing and shaking a rattle, crawling to discover where music is coming from)</li> <li>• Acquire the sounds and rhythms of native languages and music</li> </ul>



Developmental Period	What Music Can Contribute
<p><b>Toddlers: Years 1–3:</b>            In these years, young children’s worlds expand. They learn to walk, run, skip, and chase. They develop words and then whole sentences, using language to share their independent experiences, thoughts, and questions. As a result, music can:</p>	<ul style="list-style-type: none"> <li>• Provide simple songs that help children pick up and remember lyrics, movements, and turns</li> <li>• Become a part of daily routines, marking and easing transitions (e.g., songs for getting dressed, cleaning up, waking up, and bedtime)</li> <li>• Teach the rules and pleasures of social exchanges through simple games with turn-taking, waiting and listening, and building on what others do</li> <li>• Encourage spontaneous, improvised activity (e.g., singing self to sleep, inventing chants as part of physical play, making up songs as part of imaginary play)</li> </ul>
<p><b>Preschoolers: Years 4-5:</b>            In this period, children’s symbolic capacities expand, yielding much more complex language, imaginative play, and more intricate music making. They can think about past, present, future, and possible, multiplying the ways in which they bond and share with siblings and peers, as well as adults. In this rapidly expanding world, music can:</p>	<ul style="list-style-type: none"> <li>• Support children as learners by giving them songs and games as a way to master numbers, letters, colors, and days of the week</li> <li>• Fuel imaginative play (e.g., scribbling down the words and chants for different characters)</li> <li>• Encourage vigorous physical activity (e.g., marching, composing sound patterns on playground equipment)</li> <li>• Become the keepers of the games, chants, and songs of their community by passing them on to siblings and younger children, or by adding verses, changing choruses, and singing them in new ways</li> </ul>



We might summarize the many ways in which music making supports young families as shown below:



# Putting Music to Work: Findings from the Landscape Review

*In a second section, we investigate how on-the-ground programs put music to work on behalf of young children and their families. In particular, we look at how programs in four different sectors—health care, planning, early education, and arts and culture—put music to work.*

- **Ensuring health for all family members:** Programs reviewed here capitalize on music’s potential to improve caregiver and child health. We include programs that use music as a powerful carrier of public health supports and information. We also examine how music might be used to create more welcoming, trusted, and pleasant settings for public health care.
- **Planning safe and welcoming public spaces:** This is a close look at how music enhances spaces as diverse as public housing, parks, and playgrounds. We look at the ways in which music making can create integrative environments where children of all abilities can interact, communicate, and play actively, while also providing caregivers with opportunities for respite, socialization, and exercise.
- **Designing engaged learning:** Here we explore the role of music in learning environments ranging from family kitchens to childcare centers. We ask how to ensure that imaginative and social learning become major parts of the curriculum, right along with numbers and letters.
- **Building cultural belonging:** In this area, we examine how informal and formal institutions, artists, and other community structures can ensure that all children have an equal opportunity to contribute to and participate in the arts and culture of their communities. How can theaters, stages, broadcast media, and other community structures each take a role in realizing the right of children and their families to explore, celebrate, and access music?

Throughout, we take an ecological approach to thinking about where music might be embedded by trying to think about how diverse participants, relationships, and communities might be affected. For instance, in thinking about how a home visiting program might integrate music, we review possible effects on children and caregivers. But we also ask what might happen if older siblings were involved. For instance, what could a four-year-old learn about responding to the needs of someone else by playing singing games with his baby sister? Similarly, in considering a role for music in public health clinics, we point



to consequences for families and we wonder what hearing young voices singing might mean for the nurses and doctors who work long, intense hours.

We have included programs from around the world that represent strong work in each of these sectors, prioritizing programs that are relatively low in cost and transportable to many settings. They vary from programs that use music to support new parents feeling the effects of isolation and depression, to outdoor sonic playgrounds designed to foster peer play, to early education programs that make music and movement linchpins for social and emotional development. The programs vary from carefully evaluated, multiple site implementations to proof of concept efforts that hold promise, have multiple years of operation and growing numbers of children and families, but currently lack research evidence.

## Well-Being for Young Families



# Best Practices

The programs reviewed, along with the associated case studies, make it clear that music can make a difference in the lives of young families—if it is designed to do so. Across the diverse set of programs that use music directly and indirectly with families, there is a set of best practices for building effective music programs for young families.

## Effective Music Programs Are:

### Informed

- Use existing research on the kinds of outcomes music can deliver (e.g., providing social supports for parents isolated during infancy, integrating children with special needs, teaching social-emotional skills important for school success).
- Determine where these established impacts intersect with community needs (e.g., making health clinics more welcoming in order to increase well-baby visits and reduce infant mortality, using smart phones to engage absent or distant fathers in child rearing).

### Local and Social

- Use local music and dance traditions to make the music meaningful to both children and their families.
- Involve everyone: the program should work for children, siblings, parents, and grandparents, as well as for staff who deliver and who experience the program.

### Deeply Musical

- Design music experiences that are generative and involve performing, improvising, adapting, and composing.
- Ensure activity—using large and small gestures, body percussion (clapping, stomping, snapping), and whole body movements (marching, jumping).
- Invest in quality: engage the best teachers, use the most powerful, joyous music, accompany it with the most engaging movement, word play, and games.



# Action Steps

If we are to use music as the powerful lever that it could be, advocates for young families and for music have to embed it as a powerful strategy across multiple sectors and at local, regional, and national levels:

## Public Health

- **Make music a staple of childbirth and parenting classes**, using it as a prime example of a strength and a resource families everywhere can use to connect, soothe, and celebrate,
- **Call on music's active, lively qualities to engage all family members to join in infant and child care** (fathers, siblings, grandparents, godparents),
- **Recognize music as a non-invasive, affordable, ongoing strategy to address stress** in post-partum isolation and depression, in programs to integrate migrant families, for young children made anxious by trauma and displacement, in programs that support children with disabilities,
- **Embed music as part of home visiting and community programs for families placed at risk**, using it as a generative, active setting in which to rebuild relationships and experience healing, positive emotions; where possible, build cross-disciplinary teams that draw on the insights of public health workers, music therapists, and collaborating musicians, and
- **Include music-based strategies as part of public health training for doctors, nurses, mid-wives, and volunteers**, to strengthen their communication, interpersonal, and clinical skills.

## Community Planning and Design

- **Make indoor gathering spaces an integral part of the design of affordable housing** so that families have places to come together, sing, and dance in all weathers and circumstances, and
- **Guarantee safe, local green spaces** for large-scale movement, games, and music for families who otherwise live in small spaces, and for children and families with disabilities to be with others.

## Early Childhood Education

- **Insist that music become an integral part of training for early childhood educators** who should sing and play a simple instrument and learn how to use music to teach and to create a positive and playful learning climate,
- **Ensure that educators working with children with special needs and their families train to use music** as a way of supporting and engaging entire families in the development of a member with disabilities, and
- **Recognize culturally-diverse and responsive music-making as a strategy for making new children and families welcome** in childcare and school settings.

## Arts and Culture

- **Insist that repertoire represents the many musical traditions in a community or region**, sharing the classics and masters of each,
- **Partner with colleges, universities, and conservatories to ensure that young musicians graduate knowing how to use their gifts beyond the concert hall**, including working for and with families and their young children,
- **Insist that public funding for theaters and concert halls requires informal performance spaces and programs** that welcome families for free, and
- **Engage musicians and other performing artists to promote key public health messages** about nutrition, immunization, and maternal health and well-being.

## Moving Forward

Across all sectors, we need to:

- **Advocate with local and national governments to see the arts, including music, as cost-effective, culturally-responsive strategies for promoting the well-being of young families**, making them a prominent part of health, education, and planning,
- **Support continuing research on the impact of music programs**, particularly as they are implemented in challenging settings such as refugee camps, conflict zones, and in the path of natural disasters,
- **Build international consortia that pool implementation findings and outcomes** from programs on the ground, and
- **Use new digital opportunities to build audiences for music-making and for documenting the impact of music on young families.**



A group of diverse children, including boys and girls of various ethnicities, are sitting together in what appears to be a classroom or community center. They are all looking towards the right side of the frame with expressions of interest and joy. The lighting is warm and natural, suggesting an indoor setting with large windows. The children are dressed in casual clothing, and the overall atmosphere is one of engagement and learning.

# What We Know: How Music Builds Relationships, Social-emotional Skills, Communication, Learning, and Belonging

*Photo credit: Yannis on Unsplash*



Music has a potential role to play in the first five years of life. In the following pages, we explore what research suggests this might be, particularly with respect to a core set of outcomes:

- A network of strong family relationships,
- Social-emotional skills for understanding self and others,
- The development of language and other forms of expression, and
- Learning about the world.

## Methods

This review addressed the integrative question of how music making could support the development of young families. The aim was to gain an expansive picture of the available research evidence and programs making a difference on the ground. Therefore, our inquiry focused on the results of a wide range of individual studies as well as some relevant gray literature, such as evaluation reports. With this integrative purpose in mind, we included findings from quite different research methodologies, including qualitative evidence from clinical studies, as well as quasi- and fully-experimental designs in order to highlight both the depth and the breadth of current work in this field.

To be included in the scan, research had to meet the following criteria:

- It had to be related to music (or associated activities like dance or movement) or a basic developmental process that enables music making,
- It had to focus on young children (0 – 5) and/or families of young children, and
- It is recent (since 2000) or foundational in the field.

In Appendix A, we include a table of the specific programs we highlight in the Landscape Review, citing the evidential support for their outcomes.

## Caveats

Throughout this paper, our emphasis is on identifying where music might contribute most to the well-being of young families. To do this, we have relied on research into child and family development in the first five years of life. We acknowledge that this research is limited in a number of ways:

- The majority of research comes from high-income nations and journals published in or translated into English.
- Much of this research focuses on Western and formal music. Despite all that it might teach us, indigenous, and more informal music making with children is less documented and studied.



- Mother-child interactions are often presumed to be the locus of most early musical activity in ways that ignore the consequences of joint music making between children and their other life partners: their fathers, siblings, grandparents, cousins, and peers.
- There are major blanks in the existing research. Specifically, there is little research about children’s own informal, spontaneous musical activities; the specific impacts of different forms of music making; or how music impacts the adults and environments in which young children are developing through music.



# The Pre- and Perinatal Period



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Even in the womb, a fetus develops aurally (detecting differences in pitch and volume) and recognizes the voices of caregivers. In the first weeks after birth, infants already produce coos and murmurs, accompanied by mouth movements resembling speech that elicit engaged responses from their caregivers that are a foundation for attachment, communication, and language development, and later sharing of songs, games, and stories. In this period, music could be part of a couple’s preparation for childbirth and a strategy to take into parenthood. Listening to music during pregnancy leads to greater well-being and reduced postnatal depression symptoms in the first three months postpartum, especially among mothers with lower levels of well-being and higher levels of depression at baseline (Fancourt & Perkins, 2017; Fancourt & Perkins, 2018a, b, c, and d). Pregnant participants’ subjective impressions of a prenatal singing class showed that the opportunity to practice singing in a group class with other mothers provided them with social support, relaxation, satisfaction in their own abilities, and, postpartum, improved closeness with and love for their babies (Carolan, Barry, Gamble, Turner, & Mascareñas, 2012).

## Relationships: A Network of Bonds

Even the earliest infant-caregiver interactions can impact the way children form social bonds and relationships throughout life (Feldman, 2017). For families who experience premature or traumatic birth, sharing through music can be one way of bonding with their child even when they cannot hold their baby. Even in the earliest weeks, caregiver-infant dyads develop characteristic patterns of signaling and response (Bargiel, 2004). Even in its simplest forms, the way caregivers speak to infants has more musical qualities (more regular temporal structure and distinctly higher pitch range) than adult-directed speech (Saint-Georges et al., 2013). It is these distinctive contours that make what is often called “parentese” such a distinctive and attention-getting signal of someone else’s presence and interest, promoting caregiver-infant attachment. Used by mothers, fathers, grandparents, or older siblings, this kind of sing-song speech, along with actual melodies like lullabies, become the sounds of a network of



reliable relationships (Trehub & Trainor, 1998). In addition to parents, siblings as young as two can be effective singing partners for their infant brothers and sisters, altering their delivery in the same ways that adults do, using higher mean pitches and a distinct vocal quality (Trehub, Unyk, & Henderson, 1994). This is music making at its multi-directional best: babies are entertained and soothed, while older children practice responding to and caring for others in carefully tuned ways.

As central as mothers and siblings may be, too little attention has been paid to the involvement of other caregivers, especially fathers, in children’s earliest weeks as family members (Burkart, Hardy, & Van Schaik, 2009). Initial findings on fathers’ distinctive musical contributions, like similar findings on their styles of playing (Rinaldi & Howe, 2012; Tamis-LeMonda, 2004), point to fathers having a distinct style when singing to infants—melodic, accented, and jaunty, but without dramatic rises in pitch (Trehub et al., 1997). Even young infants show greater visual attention to fathers’ singing than to mothers’ singing (O’Neill, Trainor, & Trehub, 2001), suggesting the added value of including fathers as part of babies’ musical worlds. Musical experience during infancy and childhood, including being sung to by one’s father, is correlated in the longer run with young parents’ own musical behaviors and willingness to expose their own children to music (Custodero & Johnson-Green, 2003).

In an even larger frame, there is emerging evidence that equalizing the burden of childcare-related work and interactions between women and men could improve maternal and child health outcomes and transform gender relationships and norms for the benefit of all involved (Barker, Ricardo, Nascimento, Olukoya, & Santos, 2010; Foley, Davies & Powell-Williams, 2015; Tokhi et al., 2018; Comrie-Thomson et al., 2015). Potentially, father-infant music making in the earliest weeks could be an engaging way to inaugurate this kind of mutual responsibility.

## Social-emotional Growth: Soothing and Arousal

Prenatal musical experiences have staying power: lullabies played during their third trimester, as compared to novel lullabies, enhance soothing capabilities in 4-week-old infants (Polverini-Rey, 1992). Even in their first weeks, infants respond to the affective tone of the voices they hear, reacting differently to negative, positive, and neutral contours (Trehub & Trainor, 1998). Additional studies of pre-term infants provide insight into the ways in which the soothing effects of music can help to buffer some of the most stressful experiences for young families: the complications of birth injuries and low birth weight. In neonatal intensive care units (NICUs), playing lullabies reduces heart and respiratory rates and leads to reductions in pain scores associated with venipuncture. Significantly, these effects last, even when the music ends (Amini, Rafiei, Zarei, Gohari, & Hamidi, 2013; Barandouzi, Keshavarz, Ashayeri, & Montazeri, 2012). Live music therapy sessions in NICUs are also associated with deeper sleep (Arnon et al., 2006), greater weight gain, and shorter hospitalization (Standley & Swedberg, 2011). Here, too, there are possible wider systemic effects. Family-centered music therapy during these times allows parents to see how even their fragile infants respond and cope. In turn, parents’ own anxiety is lessened, helping them to relax and connect to their baby (Ettenberger, Rojas Cárdenas, Parker, & Odell-Miller, 2017). In this way, music-making sessions may provide a context in which health care workers and families can build trusting relationships in a moment of crisis and need.



## Communication: Understanding and Making Human Sounds

Even before an infant is born, babies are communicating members of a social world. In the womb, fetuses develop aurally (detecting differences in pitch and volume) and recognize maternal voices. The cry melodies of 3- to 5-day-old newborns already reproduce some of the properties of the native languages they heard prenatally (Mampe, Friederici, Christophe, & Wermke, 2009). Early auditory exposure to a mother's voice enables infants to recognize and prefer their mother's face as the source of those familiar sounds, suggesting how multi-modal human relationships are (Trehub & Trainor, 1998). In the first weeks after birth, infants can already produce coos and murmurs, accompanied by mouth movements resembling speech, that elicit engaged responses from their caregivers, leading to brief cycles of interaction that are the foundation for attachment and later vocal interactions.

## Learning: Encountering the World

Many people think that, since babies sleep so much, little learning takes place while they sleep. Not so. Sleeping infants take in a huge amount of information about the world outside the womb. Moreover, all that sleeping is vital for learning: sleep facilitates neural maturation, preparing infants to process and explore the environment in increasingly sophisticated ways. Second, sleep allows for the memory consolidation of waking experiences. Finally, infants process stimuli and learn about contingencies in their environment even while asleep (Tarullo, Balsam, & Fifer, 2011). Thus, soothing routines, such as the lullabies, humming, and rocking that induce the transition to sleep, can be key to establishing robust cycles of wakefulness and rest critical to family routines. Well-rested infants are alert and ready to interact with their world.

## Some Possibilities

When considering what we know about how musical interventions can support young families during prenatal and early postnatal life, two major possibilities emerge, one for parents-to-be, and the second following birth. Prenatal care or parenting classes can empower caregivers of both genders to make music and sing to their developing infants, enriching the quality of auditory exposure for their children, setting a precedent for shared communication and play, and underscoring how many ways there are to respond to and care for an infant. Thinking ahead to the importance of infant soothing for an entire family, music making could be an important strategy to build into prenatal parent education programs, providing fathers and mothers alike with an entirely portable, always available, strategy for soothing their distressed baby.

In the weeks and months following birth, families are on their own with needy and unpredictable newborns. In this period, music can be more than just a comfort; it can also promote important health practices that can reduce infant mortality. Consider this possibility:



### Life-saving Songs

As a health intervention, songs and singing have known benefits (e.g. self-regulation, bonding with others, communicative development), coupled with zero cost and total portability. Building on this knowledge, a team of researchers joined with local health workers in Zambia to bring down the high levels of maternal and infant mortality, especially among young mothers. Given high levels of poverty, their search was for a zero-cost intervention (Radjou & Prabhu, 2015) that built on local practices and materials. Their approach was simple, flexible, and well suited to a country that is resource-poor and musically rich. Starting in 2019, the researchers (David Swann, James Reid, and Barry Doyle) worked with local partners at St. Johns Zambia to think through the ways in which music could help to deliver sustainable and scalable maternal and child health care strategies. The team used creative workshops to capture “day in the life” activities, social networks of care in local communities, and identified critical well-being messages that pregnant adolescents needed: maternal nutrition, APGAR warning signs in a sick infant, and more. Volunteer clinic workers, many of whom were mothers and respected elders, composed songs carrying these potentially life-saving messages which are increasingly an integral part of pre-natal care visits (Reid & Swann, 2019).



**Kayosha lullaby volunteers rehearsing**  
Photo Credit: Kayosha MCH Clinic, Zambia

# Early Infancy: Months 2-5



Photo credit: Zack Vessels on Unsplash

By the age of two months infants have longer awake periods and better self-regulation. At this point, vocal play and proto-music making become channels for bonding between caregivers and infants. Family members experience the emergence of “talk” as infants squeal, coo, babble, and chuckle. Around 4 months babies become active communicators, going back and forth with caregivers and siblings, giving other family members the pleasure of being a source of interest and delight. Fathers’ and mothers’ singing provokes distinctive responses, creating an early repertoire of different duets. In effect, music making becomes social. Through this kind of early vocal play, families lay the groundwork for an emerging repertoire of communications, strengthening attachment and encouraging emotional and expressive development.

These early months are an opportunity to make childcare shared work, involving fathers and even older siblings in singing and playing with an increasingly wakeful infant. When families struggle to bond with their infant due to postpartum depression or chaotic circumstances, joint music making can provide one engaging way to be together, building the kind of mutual responsiveness that nurtures all partners.

## Relationships: Caring for Babies and their Caregivers

Infants begin to show preference for familiar companions during this period. They direct more emotion toward familiar caregivers and frequent companions through smiles, laughter, fussing, and crying. This makes interactions much more engaging and rewarding for all the partners and creates an ideal opportunity to build an expanded set of relationships. Babies are especially sensitive to the marked contours and higher pitches that characterize “parentese” and singing. Emerging holding and grasping skills make sound-based games with simple instruments like bells and rattles a new possibility. Infants can sit up when propped, with no head droop, making upright and face-to-face play a new possibility.



Singing interventions in early infancy reduce anxiety, increase positive affect, and improve self-reported measures of mother-infant bonding. Singing aloud to a baby leads to a greater expressivity and interactional synchrony that builds infant-caregiver attachment and eventually promotes infant language acquisition (Gratier, 2003). The mutual impact of early musical activity is clear: caregivers can see and hear the effects of their active presence and children learn the back-and-forth characteristic of human exchanges.

But during this same period, caregivers can experience stress and isolation, particularly if they are poor, single, or separated from their families of origin, co-workers, and friends. Some women experience postnatal depression (PND), a debilitating loss of energy, interest, and hope that disrupts early bonding (Fancourt & Perkins, 2017; 2018d; Tsao, Creedy, & Gamble, 2015). When this happens, mothers speak and play with their babies less, losing the communicative and musical quality that characterizes much mother-infant exchange. In turn, babies become less interested and begin to exhibit symptoms of depression (Robb, 1999; Saint-Georges et al., 2013). Recognizing and altering this cycle early is critical as prolonged maternal depression can have lasting effects on children (Ainsworth, 1985; Grossmann, Grossmann, & Waters, 2005), increasing the risk of adult depression and chronic pain in children. The burden of PND disproportionately affects the most underserved and vulnerable families. For example, immigrant mothers, separated from family supports and cultures of origin, are more likely to exhibit symptoms of PND, exhibiting less synchrony and expressiveness than non-immigrant groups in both their home and host countries (Gratier, 1999; Gratier et al., 2015). These losses can have important implications for mothers' well-being and sense of competence, for the developing bonds with their children, and for their children's language acquisition and emotional regulation (Fancourt & Perkins, 2017; Pino, 2016; Webb, Heller, Benson, & Lahav, 2015).

Pharmaceutical interventions may not work well, be affordable, or even available. Moreover, medications may fail to address the interplay of human factors like poverty, cultural isolation, and missing social supports. More holistic psychosocial interventions, among them musical programs, may do a better job (Carolan et al., 2012; Clift et al., n.d.). These programs work in both directions: they address mothers' well-being, refreshing their capacity for bonding (Wolf, 2017), and they have potential benefits for infants' attachment, language acquisition, and emerging social and emotional capacities (Gerry, Unrau, & Trainor, 2012; Kokkinaki, Vasdekis, Koufaki, & Trevarthen, 2017; Kraus & Chandrasekaran, 2010). Thus, intervening early and well matters. Mothers with PND who sang with their infants experienced higher gains in emotional closeness with their infants, greater increases in positive affect, greater decreases in negative affect, and greater decreases in psychological and biological markers of anxiety (Fancourt & Perkins, 2018c). For women with moderate to severe symptoms of PND, 10 weeks of singing classes had a faster ameliorative effect than did 10 weeks of play classes or usual care (Fancourt & Perkins, 2018b; Fancourt & Perkins, 2018d; Perkins, Yorke, & Fancourt, 2018). These data also show associations between singing to babies (not just listening to music) and enhanced well-being, enhanced self-esteem, enhanced mother-infant bonding, and decreased incidence of PND symptoms (Fancourt & Perkins, 2017). Participation in singing classes not only reduces stress but also leads to peripheral benefits such as increases in music-making behaviors at home, increased confidence in musical abilities, and increases in music making by other caregivers in the wider family unit, creating a more enriching early musical environment for the infant (Fancourt & Perkins, 2019).





## Social-emotional Growth: Shared Routines

During these early months, infants' cycles of behavior begin to stabilize. Infants develop an increased attention span in this period, yielding the capacity to work with another person to create shared, interpersonal spaces through vocalization and gaze. They also exhibit more regular periods of wakefulness and sleep. Establishing these routines yields an increasing sense of regularity and predictability for everyone, affecting the mental health of everyone in a household (Mindell, Meltzer, Carskadon, & Chervin, 2009). Families can encourage these cycles through musical routines that help their babies to make state transitions: rocking, crooning, and singing. In these months, there is the first evidence that different kinds of music can cue different kinds of emotional reactions. While lullabies slow and soothe, active play songs with motions are more effective at ameliorating high levels of distress and reducing arousal (Rock, Trainor, & Addison, 1999; Trehub, Ghazbaan, & Corbeil, 2015).

Movement can also play a role in how music affects infants and caregivers. A pilot program in Sydney examined the impact of a five-week music and movement program on mothers' interactions with infants in this age range, incorporating not only infant-directed singing but also rocking, swaying, and rhythmic movements (Vlismas, Malloch, & Burnham, 2013). Such programs increase mothers' self-reported use and enjoyment of music in interacting with their infants, strengthening attachment, increasing engagement in communicative exchanges with their infants, as well as increasing their use of attention-eliciting facets of "parentese," such as higher mean pitch range. Notably, the same study also found that having an instructor present to lead the mothers did not lead to optimal outcomes, while a non-face-to-face instruction model, allowing mothers to sing to their children within their own homes without an instructor present, led to the greatest reported improvements in musical enjoyment, attachment, and engagement with one's infant. In-home delivery, with the freedom to experiment with movement or rocking, thus inventing family-specific musical moments, could be a widely useful, low-cost way to use caregivers' own resources as performers.

## Communication: Sounding like a Native Speaker

During this period, caregivers intuitively use timing, prosody, and rhythmic synchrony to foster back and forth responses in non-verbal exchanges (Falk & Kello, 2017; Jaffe et al., 2001; Saint-Georges et al., 2013). As early as eight weeks, there is evidence of turn taking between adult and child (Gratier et al., 2015). In naturalistic interactions, caregivers and their 3-month-old infants selectively imitate each other's prosodic contours (Gratier & Devouche, 2011). Additionally, infants and caregivers exchange coordinated facial expressions and emotional states in their spontaneous face-to-face interactions (Kokkinaki et al., 2017). In this period, infant-directed singing is just as effective at sustaining infant attention as book reading or playing with toys, and more so than listening passively to music (de l'Etoile, 2006). When 5-month-old infants repeatedly hear a melody from a parent, an unfamiliar person, or a toy or video, they later pay selective attention to a novel individual who sings their parent's melody, as compared to a second person who sings an unfamiliar song. The amount of song exposure at home predicted the size of that preference. Neither effect was observed, however, among infants who had initially heard the song emanating from a toy or being sung by a socially unrelated person. In short, songs have become social. A parent's animated singing activates both left and right



hemispheres of an infant’s brain (Dehaene-Lambertz et al., 2010) such that infant-directed singing may aid the growth of infants’ language processing.

At the same time, family communications begin to reflect first languages and cultures, with babies beginning to sound like members of a specific community, both rhythmically and tonally. In Indian, French, and American mother-infant dyads, there are differences in turn-taking behavior, vocal overlap, and the ratio of verbal to non-verbal exchanges (Gratier, 2003). But these important developments can be interrupted by critical events such as depression or the stress of immigration (Gratier et al., 2015; Paulson, Dauber, & Leiferman, 2006; Robb, 1999). When caregivers are affected in these ways, their children also become vulnerable, with consequences even at the neural level, showing prefrontal cortex asymmetries lateralized to the right side of the brain, a pattern that is associated with a propensity to withdraw from, rather than to seek proximity to, caregivers (Dawson et al., 2001).

## Learning

Coming out of the neonatal period, babies are more alert and wakeful for longer periods, learning about and responding to the world around them. Their indiscriminate social responsiveness means that the vocalizations and movements of anyone in the environment are a source of learning—such as matching voices to particular people and discriminating familiar and unfamiliar voices and sounds. Fine motor development and growing eye-hand coordination mean that infants can hold and let go of an object, grasp and play with a rattle placed in their hands, and bring that rattle to their mouths to learn its shape and surface. With these developments there are the earliest rudiments of coordinated object handling and turn taking—capacities that will one day make body percussion and instrumental music possible.

## Some Possibilities

This constellation of findings points to the importance of the 2- to 5-month period when new communicative capacities start to emerge and families establish basic rhythms of baby care. These developments can spark bouts of mutual delight, connecting infants to caregivers and siblings. But these early relationships can be vulnerable—they depend on the well-being of caregivers themselves and the safety and stability of families’ lives. Early interventions, such as regular home visits from public health liaisons or home visitors, can support vulnerable families (Armstrong, Fraser, Dadds, & Morris, 1999). Singing and musical play might be one tool that could help stressed parents recognize, enjoy, and extend what their babies are ready to give back. Singing could give home visitors a highly portable and powerful demonstration of how a parent’s voice can alert and stimulate a baby, setting off shared bouts of attention and alerting parents to their own social and creative resources. Informal neighborhood or community center gatherings to sing and exchange songs can keep families connected to their musical and linguistic heritage, even as refugees or as they recover from natural disasters (see the case study on Sistema Greece, p. 55 and Libraries without Borders, p. 62).

In addition, in a 2016 study of mothers’ and fathers’ caregiving to daughters and sons under 5 years in 39 low and middle-income countries, researchers made two music-allied findings (Bornstein & Putnick, 2016). Over a



three-day period, 32% of mothers and 12% of fathers told their child a story, while 22% of mothers and 9% of fathers sang to a child. Song and story are two low-cost human transactions that, in a single moment and over time, benefit children by building relationships, informing language development, and passing on cultural heritage. But only one-tenth of the many fathers studied delivered them. Providing fathers with models or prompts to these forms of interaction (via home visits, parent meetings, or a “nudge” notification from a mobile phone) might yield measurable human benefits to children and to families where child rearing is shared and a free source of daily satisfaction to fathers as well as mothers.

### Engaging Fathers as Music Makers

Eighty percent of the world’s men will become fathers, and fathers are half of the world’s parents (Levtov et al., 2015; Kaufman, 2014). Repudiating the stereotypical picture of dads as distant, uninvolved figures, current researchers point to the panoramic potential benefits of fathers’ engagement in the lives of children. Literature demonstrates that the benefits of a father’s involvement with his family can begin even before his child is born. Including men in sexual and reproductive health and maternal and child health increases women’s chances of attending more pre- and postnatal visits, which benefits the health of both mother and child (Kaufman, 2014).

Once a child is born, a father’s engagement reduces negative outcomes, including violence against children (Kaufman, 2014) and advances positive development. Involved fathers have significant effects on the domains of young children’s language, cognitive, social, and emotional competencies (Cabrera, Shannon, and Tamis-LeMonda, 2007). Having involved fathers can begin to tip the scales on gender inequities and unequal gender norms. In addition, paternal involvement can contribute to women’s health outcomes. It can lead to better relationships within couples and can be linked to a reduction in rates of men’s violence against women.

There is evidence from all over the world that engaged fatherhood has a positive impact on boys and girls – and on the relationships they will have as adults. Girls are more empowered, and boys are more likely to believe in gender equality and to share unpaid family work if they watched their fathers do the same (State of the World’s Fathers, 2019; van de Sand, Belbase, & Nolan, 2018). Longitudinal studies show that an engaged father confers long-term benefit to his children, improving their mental and physical health, increasing higher educational attainment, and reducing involvement with justice systems and substance use (McAllister & Burgess, 2012; Israel, Behrmann, & Wulfsohn, 2017).

Moreover, there are initial indications that music could play a role in involving fathers as caregivers. First, we know infants can distinguish their fathers’ and mothers’ voices and respond to them differently (O’Neill et al., 2001). Secondly, we know that fathers often bring a characteristic style of speaking and interacting: more boisterous, teasing, and game-like. Thus, dads offer unique styles of vocal play, singing, and movement, upping the number of “channels” and styles of musical interactions (Clarke-Stewart, 1978; Tamis-LeMonda, 2004).



# Later Infancy: Months 6-12



Photo credit: Ian Gual on Unsplash

With growing motor control, infants can grab, drop, and shake objects, learning to use their emerging motor skills to create effects and play simple exchange games with toys like rattles and bells. Babies master specific vowel-consonant sounds, sounding more and more like speakers of their native languages and recognizing the sounds of their native language as familiar. By nine months infants take significantly longer turns in interactions and can hold their own in simple games with musical components (like peek-a-boo and other surprise games). The onset of crawling and early forms of walking makes long-distance communication important. Children and their families build shared sound worlds including whispers and murmurs, chats, and calls from afar. As babies' schedules for sleeping and waking and for eating and play periods stabilize, families develop their own routines, often using music and rhymes remembered from their own childhoods to help their babies transition between activities, but also passing on first languages and the cultural heritage embedded in melodies and lyrics. As older infants become mobile and increasingly independent, long-distance calls become part of their shared soundscape. As family members step up the length and complexity of these interactions, they are teaching their infants how to take part in conversations and games as their family and culture performs them (Monnot, 1999; Trainor, Austin, & Desjardins, 2000; Falk, 2004).

## Relationships

In the second half of their first year, many children develop a special preference for one or more significant people, often their primary caregivers. The baby looks to this particular person for security, comfort, and protection and shows fear of strangers and unhappiness when separated. This distress signals a maturing sense of relatedness: a baby knows and distinguishes between people, seeking the presence, voice, face, and ways of a specific person. Babies form attachments to those who respond regularly to a baby's signals in ways that are recognizable and reassuring (Grossmann et al., 2005). This marks the emergence of a mutual and sensitive responsiveness (Meins, 2013). The sounds of a significant



other’s voice, or even the playing of well-rehearsed games involving familiar movements, become part of what a young child recognizes as safe and beloved.

## Social-emotional Growth

Music may promote socialization in older infants. Studies show that during the first year of life infants become better at prioritizing and responding to socially relevant information. By six months of age, neuroimaging shows that older infants are more sensitive to sounds with increased social value (such as human communicative vocalizations, compared to non-human vocalizations). Their brains exhibit more selective neural activity in response to caregivers and socially relevant communication than earlier in life (McDonald et al., 2019; Saito et al., 2019). Increasingly, infants listen selectively to people who are socially relevant, and when those people use highly prosodic speech and music-like contours to capture young children’s attention, they promote this socialization process (Gros-Louis, West & King, 2014). Children who started group musical training by the first year of life have higher empathy scores, communication scores, and extraversion scores than their peers later in grade school, suggesting that early group music making may have lasting effects on sociability outcomes for children (Kawase, Ogawa, Obata, & Hirano, 2018).

By the second half of their first year, infants can share an attentional space with others, creating a social world for joint activity (Carpenter, Nagell, Tomasello, Butterworth, & Moore, 1998). This opens up games of object exchange, shaking, and dropping along with simple music making with shakers, rattles, or bells. They begin to smile at, reach toward, and touch other infants (Hay, Payne, & Chadwick, 2004), initiating what will become a world of peer play. The delay or disturbance of these kinds of early sociability may be some of the earliest observable indications of social and affective disorders such as autism (Clifford & Dissanayake, 2008).

## Communication

Increasingly, infants use the sound repertoire of the languages they hear around them. Babies master vowel-consonant sounds of their first languages, sounding more and more like speakers of their native language and recognizing the sounds of their native language (Levitt, 1993; Kuhl et al., 1997).

Infants show preference for “parentese” over adult-directed speech and for infant-directed singing over infant-directed speech (Masapollo, Polka, & Ménard 2016). These preferences are important because they increase infants’ attention to the language events that other speakers design to alert and interest them, thereby facilitating the acquisition of the languages of home and community. These early vocal interactions are the medium of enculturation into one’s native language, and serve as scaffolding for complex syntax processing abilities that form throughout development and are necessary for language acquisition (Burnham, Kitamura, & Vollmer-Conna, 2002). For instance, studies have shown that “parentese” across several cultures involves the elongation of vowels, and that this vowel stretching prepares infants for the specific kinds of phonemes and words that are common to their native language (Kuhl et al., 1997). Between 6 and 12 months of age infants’ babbling actually begins to take on characteristic features of their ambient language. By 11 months of age, babble pitch and rhythms of speech have been shown to vary in characteristic ways between infants growing



up with caregivers who speak different languages (Levitt, 1993). Caregivers in these early interactions may also subconsciously bracket phrases in ways that are common to sentences in their native language, thus preparing their children for language acquisition early on (Morgan, 1986).

Drawing on all these skills, older infants become active members of their native language communities. They can respond to their name, understand simple commands (e.g., “No!”, “wave bye,” or “give a kiss.”).

## Learning

Between 6 and 12 months, babies become focused explorers. They can crawl toward an object that catches their attention and pursue it if it rolls away. They can sit for long periods to examine and turn objects held in a pincer-like grip, inspecting whatever makes them curious. When toys roll away or fall down, older infants know they continue to exist, even if hidden. With these skills, older infants are ready for movement and clapping games like “pat-a-cat” and “peek-a-boo.”

Finally, at this age, active music making (singing, clapping, etc.), as compared to passive listening, facilitates enculturation into culturally specific tonal systems of music (Trainor, Marie, Gerry, Whiskin, & Unrau, 2012). This suggests that as early as the first year of life children begin to pick up not only the sounds of their native languages but also the characteristics of the musical systems that surround them. Older infants’ abilities to make proto-linguistic gestures and sounds in response to musical events mean they can begin to participate in cultural events outside the home, bobbing to music, laughing and smiling at bursts of sound, and joining in clapping. In arms or up on a parents’ shoulders, they can join in, amplifying a family’s belonging and certifying that there is a next generation to hear beloved songs and stories.



*“A Mommy and Baby Singing Together” drawn by a 3-year-old artist during a singing workshop*

Photo Credit: WolfBrown



### Some Possibilities: Early and Active Music Learning

Curious about how early infants can learn from music, researchers randomly assigned 6-month infants to 6 months of active musical classes that featured active singing or passive listening to music. In the active music classes, infants and parents joined in movement, singing, playing percussion instruments, and building a repertoire of lullabies and action songs. The classes emphasized musical expression, listening in order to play a percussion instrument or sing at the correct time, repetition of the repertoire, and encouraging parents to develop an awareness of their infants' responses. Parents were encouraged to play a CD at home that included the songs they and their babies learned together in class. By comparison, parents and children in the passive music classes listened to a rotation of made-for-children CD's while they interacted at different play stations (e.g., stacking cups, blocks, balls, books, etc.) (Corrigall & Trainor, 2010; Gerry & Trainor, 2012).

Babies in the active music classes acquired culture-specific knowledge of Western tonality, preferring to listen longer to musical excerpts exhibiting familiar tonal structures. In addition, they exhibited larger and/or earlier brain responses to the familiar Western musical tones, indicative of more advanced tone processing. More surprisingly, these same infants also showed earlier and more robust pre-linguistic communicative gestures and social behaviors.

Given these findings, it is worth asking, what if singing classes were a regular part of:

- Early parenting classes,
- Well-baby visits in which health workers observed children's social and emotional development, and
- Early interventions for babies who show developmental delays or possible early signs of being on the autism spectrum?



# Interdependence and Autonomy: Years 1-3



Photo credit: Cole Keister On Unsplash

As young children learn to move independently—walking, running, and climbing—they begin to have physically separate worlds from their caregivers, whether that’s squatting to look at bugs or escaping to another room. As they develop language, they can share their internal lives, independent adventures, thoughts, and questions. These same abilities let them pick up and invent their own songs. Between peers, early chants and invented songs begin to organize social exchanges like turn-taking, mutual imitation, and games. Children develop sound worlds that include the up-down contours of language, as well as the dynamics of whispering, chatting, and calling and enough motor control for clapping, slapping, and stomping. With these basic elements they can invent and share their own songs and instrumentals. At the same time, during this period of very rapid development, families may discover that a child has developmental delays, whether that is due to medical issues (hearing loss, autism, or malnutrition) or psychological issues (such as those linked to trauma). For them, music can become a vital channel for communicating and connecting.

## Relationships

By this age, many young children have formed clear emotional bonds, most often with their regular caregivers. They stay within close proximity of the person with whom the bond has been formed, get upset when that person is not around, and are easily comforted upon the return of that person. During this stage, the infant or child can also form multiple close relationships and attachments to the other parent, close family members, siblings, or neighbors. The formation of strong attachments facilitates exploratory behavior as the significant others act as home bases from which infants venture out and explore, and to which they return for assurance or to share discoveries (Grossmann et al., 2002).



Photo credit: WolfBrown





With those relationships established, even 1-year-olds can push out and engage in cooperative games with their peers, taking part in sustained interactions that entail mutual engagement, repetition of key actions, alternating turns, and a playful, non-literal quality (Hay et al., 2004). Across a number of different cultures, the joyful, exuberant quality of toddlers' cooperative play has been noted (Løkken, 2000). Other early forms of pro-social behavior (sharing, helping, and comforting peers who are in distress) also begin to emerge, signaling the opening of a world of mutual performance and invention.

## Social-emotional Growth

Musical programs for young children also hold value in teaching children about their emotions and how to regulate those feelings. Music programs can teach children to control their emotions in ways that allow them to better interact socially with their peers. For example, early childhood music programs have been shown to aid children with special needs to integrate socially and interact with their neuro-typical peers, leading to increased interaction between both groups of children (Humpal, 1991). Research on musical programs involving children with disabilities and their families suggests that listening and performing together can help develop stronger relationships and communication strategies.

Additionally, research shows that music lessons can aid in the processing of emotions in speech, and that, in deaf children with cochlear implants, music training can aid in the perception of emotional prosody of speech (Thompson, Schellenberg, & Husain, 2004; Good et al., 2017). Thus, not only can musical programs help children regulate their emotional states, but such programs can also aid children in perceiving the emotional states of others through their speech prosody, one of the key perceptual components to social communication in humans. Altogether, these findings support the value of musical interventions in teaching children to regulate their emotional states and socialize effectively as a result of this enhanced emotional awareness.

## Communication and Expression

Another key developmental process between the first and third years of life is the advancement of language processing and production capabilities. In young children, there is still significant overlap between speech and music perception systems, with both activities drawing on the bilateral frontotemporal neural network (Griffiths, Johnsrude, Dean, & Green, 1999; Kotilahti et al., 2010; Merrill et al., 2012; Sallat & Jentschke, 2015). As a result of these findings, researchers argue that there is potential for bidirectional transfer effects between music and language related skills, as both likely rely on shared cognitive systems especially at this early developmental time (White, Hutka, Williams, & Moreno, 2013; Brandt, Gebrian & Slevc, 2012).

In addition to improvements in speech processing, musical training has been shown to have benefits for second language acquisition, as long-term musical training leads to benefits in processing pitch patterns of foreign languages (Wong & Perrachione, 2007). One study found that toddlers vocalized more in response to adults improvising with tonal and rhythmic patterns during musical play than to those who did not (Valerio, Seaman, Yap, Santucci, & Tu, 2006). This suggests that bringing music into caregiver-child interactions could promote toddlers' own communicative abilities. Potentially, this addition could be especially helpful for



children experiencing language delays or children for whom spoken language will always be challenging. It is clear that the complexity of language input in conversation, stories, and songs is a major source for developing the neural structures that underlie language development (Kuhl, 2011).

One such study examined outcomes of a short-term music therapy program for mothers and toddlers. The sessions lasted for six weeks and took place either in clinics or in a local nursery school. The researchers found that parents viewed their children’s behaviors less positively in the clinical setting than in the daycare, suggesting the importance of location in the delivery of musical services for young families (Oldfield, Adams, & Bunce, 2003). Naturalistic contexts for play such as the home or the daycare setting may be better locations for programs for toddlers than clinics, where families leave the familiarity of home and may be nervous about professional judgments.

## Learning

Toddlers absorb the basic categories that organize activity in their communities: the grammar of the languages they hear around them, the names for colors and objects, numbers and quantities. In many cultures, childhood songs, sung over and over, indoors and out, are effective teachers for days of the week, seasons, quantities, relations, and social roles (Fisch and Truglio, 2014).

For example, in one study, researchers examined the effects of structured group music making on development in children between the ages of 12 and 24 months and found that participation in four to seven music sessions with their caregivers led to significant increases in higher level cognitive skills (including communicative, social, motor, and music skills) for toddlers compared to controls who did not participate in the sessions (Standley, Walworth, & Nguyen, 2009).

Altogether, the research suggests that music and movement experiences can support the development of an expanded set of relationships and emotional regulation skills, as well as problem-solving and thinking. But to realize these opportunities, child care staff and teachers may need expanded musical confidence and skill. Suthers (2001, 2004) found that caregivers and staff overcame their reluctance about teaching music making only after observing the children’s excitement—a finding that speaks to how important it is to acknowledge children’s enthusiasms in designing early childcare programs.



### Some Possibilities: What If There Were Music and Movement Spaces?

Many studies suggest that musical performance and music training are associated with improved fine motor control, at both the neural and behavioral levels (Costa-Giomi, 2005; Moraes et al., 2018). It is a time when safe and engaging outdoor spaces that include opportunities for musical and movement play could promote both large scale and fine motor development.

So imagine simple spaces – courtyards between apartments, a cleared vacant lot, small pocket parks, or an open yard on the side of a childcare facility, or even a clinic. What if those spaces contained:

- Simple sound-making surfaces – cylindrical stools and tables that could also function as drums?
- Hanging chimes of recycled pipe or hollow bamboo cut in lengths to produce different pitches?
- “Speaking and listening” tubes into which children could whisper and shout and hear their voices magnified? or
- A simple performing platform with space for a ring of listeners?
- Designed so that children of all abilities could play?
- Built and maintained by families using local and recycled materials?
- Open from dawn to dusk, and at night for performances?

What if those spaces were:

- Staffed after school by neighborhood adolescents, trained and paid a stipend to play with younger children, especially to improvise vocally and instrumentally?
- Open to local younger musicians as a place to rehearse and perform for an appreciative audience?
- Welcoming to fathers, engaging them in the early after work hours as a place for rousing, out-of-the-home musical and movement play? or
- Sometimes reserved for families and children with special needs, staffed by an encouraging public health worker?



# Expanded Learning: Years 4–5



Photo credit: Emma Roorda on Unsplash

As preschoolers, children’s symbolic capacities expand, yielding much more complex language, imaginative play, drawing, and more intricate music making. They can think about past, present, and future and share actual, imagined, and hypothetical experiences in extended conversations, stories, and games, multiplying the ways in which they bond and share with siblings and peers, as well as adults. Music can support children as early learners giving them songs and games to learn numbers, letters, colors, and days of the week. Scribbling down invented notes and words to a song can be a way to explore writing. Making sounds on playground equipment can be a science exploration. Musically, children can remember, add onto, and invent songs that reflect the scales and rhythms of their cultures, inheriting and expanding on the music of their families and homes. As their understanding of others’ minds and intentions develops, preschoolers can join others in ensemble music making, playing together, taking turns, and improvising.

## Relationships: A Community-wide Network

In the preschool years, children develop skills that alter the nature of intimacy from physical proximity to sharing actual and imagined worlds. The people who matter are those who share memories, answer questions, or explain difficult or strange events (a dog bite, a stolen toy, or a missing relative) (Bokus, 2004; Griffin, Hemphill, Camp, & Wolf, 2004; Guajardo & Watson, 2002). During this stage, children can sense the goals of others and consider adjusting their plans according to these goals. For example, a toddler may cry excessively due to hunger and wanting a snack immediately, but a 4-year-old may be able to wait patiently for a familiar adult to provide, realizing that a crying baby comes first.

## Social-emotional Growth

In these years, children begin to engage with their peers in genuine group play, rather than the parallel play of their earlier years. A range of studies suggests that music making can support these affiliations and the pro-social behaviors



that support them. For example, researchers have found that a preschool arts program (including music and movement) for low-income children promoted better emotional regulation and greater frequency of positive emotions in the children, compared to their same-age peers, as reported by their teachers (Brown & Sax, 2013). Humpal (1991) found that an early childhood music program for preschoolers both with and without handicaps was linked with greater peer interaction and acceptance of all individual differences. Findings from studies on slightly older children also suggest that music making can continue to impact social skills and prosociality (Schellenberg, Corrigan, Dys, & Malti, 2015). Fuller, Galvin, Maat, Başkent, and Free (2018) found that young cochlear implant users who receive face-to-face music training to improve their speech patterns and interactions performed better, and were more satisfied, than those receiving computer-based music training alone.

## Communication and Expression

As discussed earlier, when young children engage with music, they are developing the same perceptual processing systems that facilitate the encoding and identification of speech sounds and patterns (Anvari, Trainor, Woodside, & Levy, 2002; Brandt, Gebrian, & Slevc, 2012; Patel, 2003; Peynircioglu, Durgunoglu, & Uney-Kusefoglou, 2002). Gromko (2005) studied kindergarten children who received four months of music instruction for 30 minutes weekly, including active music making and rhythmic movement, rhythm, and pitch as well as symbol to sound associations. The children who received the music instruction showed significantly greater gains in phonemic awareness than their non-participating peers. Children who acquire early musical skills also exhibit higher levels of the ability to perceive and produce phonetic contrasts in a second language (Slevc & Miyake, 2006) as well as reading earlier in their first language (Anvari et al., 2002) and interpreting affective speech contours and rhythms (Thompson et al., 2004). One such study suggests that 3- to 5-year-olds that speak a tonal language, Mandarin, have better pitch processing abilities than age-matched children who speak English (Creel, Weng, Fu, Heyman, and Lee, 2018). Other studies have shown that musically trained children perform better at auditory learning tasks than their peers, as measured on the neural level (Mandikal Vasuki, Sharma, Ibrahim, & Arciuli, 2017).<sup>1</sup> In a world where increasing numbers of children will need to be multi-language learners and speakers, it is worth asking how early music might encourage the acute auditory skills needed for communicating in a global world.

During the preschool years, children learn the more complex rules of grammar of the languages they hear around them (Fenson, Pethick, Renda, Cox, Dale, & Reznick, 2000; Riley Children’s Health, n.d.). They can invent narratives, create imagined worlds, make jokes, and play with figurative language (Cacciari & Padovani, 2012). These same generative abilities allow them to improvise on the basics of musical structures and the tonalities of the music that surrounds them, becoming spontaneous composers, performers, and notation makers (Barrett, 2006; Archer, 2004; Malloch, 1999; Trevarthen & Malloch, 2000; Trevarthen, 2002).

<sup>1</sup> There is extensive literature, which we have not reviewed here, on the relationship between formal musical training and cognitive and academic skills in the preschool period. We have instead concentrated on the much more widespread forms of musical activity and their consequences for relationships, social-emotional growth, communication, and cultural belonging.



Kalmar (1982) studied the effects of singing and musical group play twice weekly for three years on preschool children of 3 to 4 years of age and found that these children scored higher than controls on creativity, had higher levels of abstraction, and showed greater creativity in improvised puppet play. Koutsoupidou & Hargreaves (2009) studied 6-year-olds, comparing those who had opportunities for musical improvisation with those where music lessons provided no opportunities for creativity. Performance on Webster’s measures of Creative Thinking in Music assessed change in extensiveness, flexibility, originality, and syntax. The improvisation activities significantly supported the development of creative thinking as opposed to the didactic teaching. This suggests the powerful role for open-ended and improvisatory activities. Unlike adult compositions, these songs are likely to be different every time, as children elaborate on themes, explore musical ideas, and use music to understand the world and communicate their understandings to self and others. These invented compositions show that even 3-year-olds are capable of complex musical thinking involving both rhythm and melodic lines (Gluschankof, 2002; Young, 2003). At the same time, children’s early songs and dances often echo and play with the melodies, lyrics, and moves they see and hear, making those performances one of the powerful ways that children absorb and re-make their cultural heritage (e.g., popular radio tunes, lullabies, religious melodies, and political anthems), exploring all the sonic worlds they want to claim.

## Learning

Preschoolers are inveterate questioners. They want to know how and why. Their increased symbolic skills (language, drawing, counting, etc.) fuel these inquiries. Between three and five, children can use these skills to compose, notate, and perform music that they invent. But children’s learning is not all from the shoulders up. When preschool programs facilitate group activities with large-scale movement, the play becomes a carrier for more complex peer relations in the preschool years (Fotakopoulos & Kotlia, 2018). Brown, Sherrill, and Gench (1981) found that an integrated music and physical education program improved preschoolers’ motor performance more than a program of pure movement exploration. Derri, Tsapakidou, Zachopoulou, and Kioumourtzoglou (2001) investigated the effect of a 10-week music and movement program on the quality of locomotor performance in children of 4 to 6 years and found that the experimental group improved on galloping, leaping, horizontal jumping, and skipping. Music-cued motor training is associated with rapid structural changes at the neural level in motor related pathways (Moore, Schaefer, Bastin, Roberts, & Overy, 2017). Similarly, there is also evidence that learning to play an instrument improves fine motor skills (Deli, Zachopoulou, & Bakle, 2006; Forgeard, Winner, Norton, Schlaug, & Fitch, 2008; livonen & Sääkslahti, 2014; Schlaug, Norton, Overy, & Winner, 2005). These developments make group games and movement activities possible, varied, and engaging.

These findings provide important grounding for early music curricula. They speak to the importance of attending to children’s interests and discoveries, rather than enforcing “correct” musical pedagogies. Adults (family members or teachers) can facilitate (or cut off) this invention, depending on whether they join in to children’s rules or seek to impose their beliefs about the “proper” way to make music (Addressi, 2009; Barrett, 1995, 1996, 2010; Berger and Cooper, 2003).



Informal music activity builds children’s musical skills and provides settings for sociability with siblings, peers, and adults, linking them in ensemble enjoyment. Current evidence suggests that children benefit in multiple ways from even semi-structured music making. Learning to play an instrument helps with fine motor coordination and rhythmic accompaniment motivates large-scale movements like skipping, marching, and galloping and the games these moves make possible.

Early and sustained music programs for children can lead to the development of perceptual skills which affect language learning, phonetic awareness, and sensitivity to the affective contours of speech, all skills that may have subsequent impacts on language acquisition, listening skills, and even early literacy and numeracy. Music also seems to improve spatial reasoning, an aspect of general intelligence related to some aspects of mathematics. Music making may strengthen positive self-perceptions and social engagement, but only if children are engaged in positive and collaborative learning experiences so that they enjoy, invest, and persist. Effective music programs balance familiar and attainable activities with challenges tailored to individual children. The environment has to be flexible for creativity and self-expression to flourish. Thus, there is strong support for the value of incorporating music making in homes, preschool settings, and public spaces that host families and where children are actively learning group play.

### Some Possibilities: Engineering, Geometry, and Composition in Preschool

In a post-industrial region of Massachusetts, where access to music education is scarce, a music education professor, Elissa Johnson-Green, invented the Ecosonic Playground Project, a program designed to provide open access to musical instrument play to underserved and/or marginalized populations ([https://sites.uml.edu/ecosonic\\_project/](https://sites.uml.edu/ecosonic_project/)). Using recycled materials (e. g., plastic water jugs, tubing, wood scraps) children imagined, drew, and then built never-before-seen instruments. Children hung their inventions on a PVC pipe frame that they designed and assembled to be the hub for their sound exploration and composition. The project involved them in designing and then wrestling with how real shapes in space assemble and attach, the mechanics of sound production, and the joint work of composition.



*One 4-year-old’s drawings of the structure and the instruments she wants to build.*  
Photo credit: Elissa Johnson-Green



**Here a group of 3- and 4-year-olds figure out the orchestration for a new composition:**

**Kate** Okay Eve, go first.

**Eve** (Experimenting with a discarded classroom hand drum) It sort of sounds like a drum. It can make two different sounds (plays both sounds).

**Teacher** Now hers sounds a little bit different, what do you think?

**Kate** They're different sounds. This is louder than the other.

*[One child plays her drum to show how it sounds. The leader then directs this child to stop playing and tells another classmate to play his drum (a large water bottle).]*

**Kate** That sounds really loud. Now, Anna (pause), don't forget to do the bucket too!

**Teacher** So, Kate, what are we going to do?

**Kate** We are going to figure out what song we are going to make but it is a song that doesn't have a song made up before.

**Teacher** Okay, so a brand-new song! Are we all going together or are we not sure?

**Kate** The first person that's going to play is Kelly, the next is Eve, then Paul, then me, then Anna, and then we will all play together to make a song.

**Teacher** All right, let's try it! That sounds good!

**Kate** Okay Eve, make the first sounds! Kelly join in, Paul join in, and then I'm going to join in, then Anna. Then, high speed! Then, slow (pause). Higher! Medium! Slow! Fast! Medium! Slow!

**Teacher** All right, that was a great start!



Photo credit: Elissa Johnson-Green

The foregoing sections review what we currently know about the ways in which music can support the lives of young families at home, in hospitals and clinics, in public spaces, and in childcare facilities during the years 0 to 5. While this research has clear limitations, the overall message is clear: as a universal form of expression and activity, music can build relationships, strengthen social-emotional skills, lay the foundation for communication and language development, and spark exploration and learning. In the following pages, we explore how programs around the world draw on these musical possibilities to amplify and celebrate human development.







# Putting Music to Work: A Landscape Review

Photo credit: BRAC Play Lab

## Setting the Stage

The foregoing Literature Review focused on the evidence we currently have that music can play a significant role in supporting and expanding young families' well-being. In this second section, we present a Landscape Review that examines where the promise of music is already being put to work on behalf of young families, and where existing programs might be expanded to do so. We look at four sectors where music is beginning to play a role:

- **Physical and Mental Health for all Family Members**, whether that occurs through home visits, primary care facilities, hospitals, public broadcasts, or cell-phone messaging,
- **Safe and Welcoming Public Spaces** in housing, community centers, transportation hubs, public parks, schools, or congregations,
- **Engaged Learning**, whether families look for healing, a safe opportunity to learn through play, or the early foundations for later success in school, and
- **Inclusive Cultural Opportunities** that preserve and honor families' heritage and welcome families into the cultural life of a wider community.

## Methods for the Landscape Review

This Landscape Review shares many of the same features as the earlier Literature Review:

- We use the term 'music' to encompass a wide variety of human expression and creative/cultural production, such as cooing, humming, clapping, and moving in addition to listening to music, singing, dancing, and playing instruments.
- We place particular emphasis on social and informal music, as compared to explicit, formal instruction or music appreciation. This means the kind of musical activity that occurs between children, between parents and children, and in the course of early childhood programs that feature play as a major mode of learning.
- In addition to our primary focus on programs that explicitly utilize music as a primary delivery mechanism, we also present findings of selected programs that encompass:
  - Other forms of artistry and creativity that are music-adjacent (dance, theater, literacy, and play-based learning and development),
  - Mass media like radio and television, and
  - Technology, including tablets, smart phones, mobile applications, videos, and websites.



- We include examples of music supporting families under all kinds of conditions: everyday life, facing or recovering from conflict within their communities, settling into new cultural environments, caring for children with special needs or acute medical needs, or living in poverty and lacking access to adequate resources and opportunity.
- We sought out programs that serve at least one, if not more, key players in the family in addition to the young child, realizing that music might affect a network of family members (grandparents, parents, young child, and siblings) and also their potential partners: nurses and doctors working in the high stress environment of a neonatal unit, musicians who engage with families, and designers working on pocket parks for neighborhoods or better refugee housing.
- Our search focused on highly portable, moderate to low cost programs that could be initiated and sustained in a wide range of settings: public housing, neighborhood parks, refugee camps, or primary care clinics. Where programs are resource-intensive, we explored how they might work in streamlined ways.

In sum, to be included in the Landscape Review, programs had to meet the following criteria.

- The program focuses on the well-being of young children 0 – 5 and their families.
- The program is based in music or combined arts that include music, or has major components that include these activities. This focus is reflected in the explicit use of keywords in title/name or published program descriptions, evaluations, or associated research.
- It is currently active or recently implemented (i.e., within the last five years).
- Evidence related to program outcomes is available, though it may vary from qualitative reports of field studies to larger randomized control designs in multiple locations.
- Information needed to determine if the program meets these criteria is publicly available or is easily attainable from program staff.

## Caveats

A major limitation of this Landscape Review is that it resulted from recommendations from existing programs and research journal literature, supplemented by internet-based searches.<sup>2</sup> Consequently, we are undoubtedly missing thriving programs doing important work that are outside of established networks, lack the staff for research, or do not have the means to create a website.

A second limitation is that many applied programs, particularly if small, young, or under-resourced, do not have the means for formally evaluating and reporting their outcomes. When they do, their information

<sup>2</sup> Appendix A includes a detailed list of search terms used in various combinations in order to find programs through search engines, NGO websites, and research repositories.



often comes from noisier, less controlled, on-the-ground inquiries. We acknowledge the often-sizeable gap between promising descriptive findings and confirmed impact with significant effect sizes. This review illustrates the need for more research investment in field-tested and locally viable music programs with potential benefits for families. Finally, many of the most likely outcomes from music-related programs – socio-emotional development, peer relations, the growth of expressive capacities, and learning through play – have been undervalued as compared to health-related and academic outcomes. As a result, it is only recently that evaluations of music and music-allied programs have been designed to capture their full impact and potential.

## Organization of the Landscape Review

Portable as it is, music can enter a variety of settings: homes, health care programs, public housing, community centers, parks, and performance spaces, using face-to-face conversations, outdoor instruments, smart phones, and live performances. The review is in no way exhaustive; rather, for each of the four sectors where we concentrated, we have outlined several projects that feature music directly, as well as several others that already use play, storytelling, and other expressive activities and which could support and be supported by the addition of music. The purpose is to portray a landscape of possibilities.

Thus, we have identified four major areas in which music can potentially play a role in supporting young families (as well as those who support them). The graphic below presents one possible view of the landscape of possibilities for music-based contributions to young families’ lives. At the center are four sectors where music programs and interventions play out. Adjacent to each sector are fields that could potentially contribute to a stronger or more widespread role for music.



## Well-Being for Young Families



# #01

## Physical and Mental Health for All Family Members

The years 0 to 5 are a time when children grow rapidly, when families develop their beliefs and routines around mental and physical health and nutrition and establish their relationship to those who provide healthcare and education to their children. Music can enhance and support these developments through:

- Building and sustaining family relationships,
- Home visiting programs,
- Primary care in clinics and hospitals, and
- Public healthcare messaging.

### Building and Sustaining Family Relationships

As mentioned in the overview, health is more than the absence of physical illness and family health includes all members, their relationships, and their capacity to thrive as a supportive human system.

For example, **Hands Up Mallee** is a collective social impact initiative operating in the Northern Mallee region of Australia. In one of its major community conversations, the organization took on a discussion of maternal and infant health, working with community agencies including the Sunraysia Community Health Services Allied Health Team and the Mildura Rural City Council (MRCC) Maternal and Child Health Services team. The resulting Hands Up Mallee’s Infant Program now educates new and young parents on healthy lifestyle practices (including feeding and nutrition habits, active play, and reduced screen time) for themselves and their infants. Extended family members are also welcome to attend the programs. Classes are free of charge, run by trained health professionals, and segmented according to infants’ developmental stages. Families attend these classes, which are conducted at Hands Up Mallee’s centers spread throughout the region (<https://www.handsupmallee.com/first-1000-days-resources>). One sample Hands Up Mallee project, Generations Music Together, uses this format to deliver a music-learning program that operates in Aged Care Facilities for residents (such as



Photo credit: Humphrey Muleba on Unsplash



grandparents) and their families. This program emphasizes the benefits of using music making as a tool for enhancing connection among family members in addition to increasing intrapersonal well-being.

Another example, **The Lullaby Project**, centers on building and sustaining strong relationships through original songwriting. The project was created by Carnegie Hall in 2011 to harness the power of singing to strengthen the bond between parent and child. Lullaby is designed to support parents' sense of creativity and competence, especially under circumstances that erode those sources of well-being such as poverty, health challenges, lack of permanent shelter, unemployment, and incarceration. The project pairs pregnant women and new mothers (as well as fathers and grandparents) with professional artists to create original lullabies for their babies. Across multiple sessions, parents and musicians develop lyrics and melodies that evoke and build the hoped-for or just emerging relationship between parent and child. The first session is a creative workshop, where a musician and an individual participant work to discover a unique personal vocabulary that evokes the parent's relationship with her child or children. The pair records this language, spoken or sung, as the first draft of the lullaby. Next, the musician and caregiver expand the composition to reflect the initial conversation. In a second session, the participant receives a draft arrangement and works on creating the final version. In a final session the lullabies are presented to participants and to an audience that often includes facility staff and invited guests—family members and the children of participants (where possible). Lullabies are made permanent through a cloud-based site and each participant also gets a CD to keep, as a record and a way to share and carry forward what s/he/they have created for their child. A qualitative evaluation with 66 participants across New York City provided initial descriptive evidence for positive effects including mothers' enhanced social connection, communication, and well-being, factors which research demonstrates are a major predictors of maternal and infant health during their earliest years (Wolf, 2017). [\(See the Lullaby Case Studies on page 53.\)](#)

## Home Visiting Programs

Home visiting programs have a proven track record for supporting vulnerable families (Armstrong, Fraser, Dadds, & Morris, 1999; Barlow et al, 2003). In these programs, a trained visitor stops by a home regularly to check in, often modeling interaction, play, communication, and even cooking skills as a way to build relationships and routines. Internationally, many governments and agencies are supporting such programs, given the clear evidence of their effectiveness and scalability. Among the demonstrated effects on families are:

- Increased
  - Knowledge about health, nutrition, and child development,
  - Time spent on learning and playtime with children,
  - Parent-child communication,
  - Use of positive (non-harmful and non-violent) discipline, and
  - Cognitive performance in children.



- Decreased
  - Childhood accidents and serious illnesses and
  - Child abuse and domestic violence.

Some home visiting programs have recognized the particular potential of music and movement to engage entire families, expand their messages about the importance of large-scale play and physical activity, reach families from a range of cultural backgrounds, and expand channels of communication within families whose children have developmental delays.

**HIPPY International (Home Instruction for Parents/Caregivers and Preschool Youngsters)** is a home visiting program that engages entire families (young children, siblings, both parents, and grandparents). It utilizes music (among other delivery modes) for families with children aged 3 to 5 years old. The organization has gained international traction, proving effective across cultures and settings. The program features toolkits that include activity books, playbooks, and tools like crayons and craft supplies, and whole-family activities such as singing, clapping, dancing, drawing, playing games, and cooking together. HIPPY International’s programs have been included in numerous evaluation studies and systemic reviews, with findings that include improved cognitive performances in children as well as parents’/ caregivers’ increased self-efficacy in communicating with and caring for their child (Barnett, Roost & McEachan, 2012; Le Mare & Audet, 2003).

**Early Years** is a similar organization in Ireland that serves families with children from birth up until 12 years of age. Early Years provides instruction to playgroup and daycare staff, parents/caregivers of young children, and other health care providers involved in long-term, ongoing care for young children. Their **Family Health Initiative** involves a participatory process where parents/caregivers learn about balanced and healthy diets and physical activity for the whole family. These dance- and movement-based activities offer routes through which families can not only gain physical exercise but also innovate and enjoy the creative process in their homes (Hawkes, Boyd, & Kelly, 2013).

**Sing & Grow** is a community music therapy organization in Australia begun in 2001 that has served over 10,000 families by 2015. Rigorously trained music therapists offer families a host of programs ranging from home visits to group music classes for parents/caregivers and their young children, workshops, and community engagement events. Evaluations of Sing & Grow’s programs have revealed results including – among many other positive outcomes – parents’/caregivers’ self-reported increases in spending playful time with their young ones, increased usage of musical activity in the home, and increased trust of health personnel (Docherty, Nicholson, & Williams, 2007).

Results from the feasibility analysis and impact evaluation of **Parents Make the Difference**, a parenting intervention led by the International Rescue Committee in Liberia from 2012 to 2013, revealed that the program resulted in the reduction of violent physical and psychological punishment and in the increase of positive parent/caregiver and child interactions. In the report, some parents/caregivers reported that they used singing in order to connect with their young children in more positive, less punitive ways (Puffer, Green, Chase, Sim, Zayzay, Friis, & Boone, 2015; Sim et al., 2014).





Many other home visiting programs are ripe for including music and movement. For example, **Reach Up and Learn**, a program piloted in Jamaica in the 1970s, now has 20-year longitudinal data revealing its effectiveness, showing that, as children, participants not only performed better academically than their control-group peers but, as adults, were less likely to participate in violent crime, and even earned more. It is expanding into 10 countries (Richter et al, 2017; Gertler et al., 2014). Home visiting has another potential dimension: early childhood music programs like South Africa’s **MusicWorks** send early childhood teachers on regular home visits to strengthen the ties between program staff and families. These sessions have two-way gains: (1) they help to ensure that activities are shared with parents and develop a 24 x 7 life, and (2) they can enrich the program curriculum with games, songs, and dances collected from homes. (See the [MusicWorks Case Study on page 70.](#))

### Primary Care in Clinics and Hospitals

As the home visiting examples suggest, music can play a role in shaping families’ habits. This can be critically important when it comes to families’ trust in and relationship to health care, especially in high stress situations where their children are ill or in danger. Music and movement can help to create more welcoming, trusted, and friendly spaces where families can negotiate wait times, interactions with strangers, and uncertainties that are often part of seeking health care. Health care services are important, but potentially off-putting to families who worry about being judged as individuals or caregivers. Changing those perceptions could mean that many more infants and toddlers receive regular care in the years when nutrition, screenings, and vaccinations are critical.

In response, hospitals and clinics across the world are experimenting with combining visits with enjoyable family events: book readings, storytelling, singing, picnics in outdoor spaces, and conversation groups. (Darsie, 2009; Hendon & Rohon, 2008; Lindenfelser, Hense & McFerran, 2012). Children’s hospitals – where resources allow – do much to design spaces to make young children and families feel comfortable and cared for in a place that may otherwise seem daunting, or even ominous. Music can also be incorporated into such health care settings by way of activities and conversation facilitators. One such example is **Boston Medical Center’s SPARK** (Supporting Parents And Resilient Kids) program. Staff at SPARK provide health care to families in need, whether those families have children with special needs or are deemed “at-risk.” They use music in small groups, in support groups, and for social skill building in young children. In health care contexts less well-resourced than SPARK’s, a playroom or a supply of toy instruments could potentially ease the stress and frustration families often experience in waiting rooms and queues.



**Music and dance is such a big part of traditional culture for us. It is always there, so people are used to it. Every public event opens with a dance. It would make good sense for us to expand our Reach Up and Learn model into a home visit that includes music and movement.**

**But I can also see music making a difference in everything we do. For instance, I think about the long wait lines for health checks that we do for families at our schools. Making music a part of that process could change it from tiresome and discouraging to an event that parents would travel to join – with everybody gaining: kids, siblings, and parents.**

**Karl Rieber, J. F. Kapnek Trust, Zimbabwe**

Research in NICUs (Neonatal Intensive Care Units) has established that music can help regulate basic functions like breathing and sucking in fragile infants (Allen, 2013). In addition, music therapists can perform for parents and premature babies and even encourage parents to sing or make music themselves as a source of bonding or, where necessary, grieving. For example, at the Children’s Healthcare of Atlanta’s Scottish Rite NICU, the Little Lullabies music therapy program brings together a music therapist with parents of newborn premature babies (Cox, 2019). Parents record their voices, singing or humming soothing tunes. These recordings are then played in the NICU so that infants are exposed to the sound of their parents’ voices, even when the parents are not physically present. Parents are also encouraged to record religious chants/tunes and culturally relevant stories for their infants.

Music can also be a tool for pain management and healing for children undergoing medical procedures such as cancer treatment (Caprilli, Anastasi, Lauro-Grotto, Abeti, & Messeri, 2007; Nguyen, Nilsson, Hellström, & Bengtson, 2010; Sahiner, & Bal, 2016). It may be that music making and listening can recruit and activate the regions of the brain thought to be involved in reward, motivation, emotion, and arousal, reawakening those pleasurable states for patients in whom illness, exhausting treatments, and stress have depressed those rejuvenating experiences (Blood & Zatorre, 2001). Music, either as a participatory activity or as relaxed listening, provides an effective distraction from the daily pain and discomfort of children’s condition or treatment. Seeing their sick children participate and enjoy music-making sessions also sustains worried families. Similarly, these sessions can sustain and relieve staff who also experience stress and grief in these settings (Wolf, 2017).

## Public Health Care Messaging

**Bhanchin Aama**, a serialized radio drama and call-in radio show produced by the **Suaahara Nutrition Project** in Nepal, and **Ahlan Simsim**, a partnership between the International Rescue Committee and Sesame Workshop, illustrate how “vintage” broadcast technologies – like radio and television – can use music to enrich public health messages that target physical and mental health for children and families. **Bhanchin Aama** presents the adventures of a well-informed grandmother and a collective of furry puppets who sing and tell stories



in an episodic show that targets health and nutrition for women and children under 2 years old. Suaahara broadcasts a “radio magazine” that includes drama, music, quizzes, and a call-in, along with a grandmother wise enough to offer information about nutrition, sanitation, and agriculture. The program invites active participation with a call-in, encouraging listeners to make a toll-free phone call to the program or to send questions and commentary via SMS message, Facebook, Twitter, or email. A 2014 mid-project survey found that 22% of women surveyed had listened to the Bhanchin Aama radio show – and of those, 82% had taken action after listening (Safi, 2014).

In Nepal, the **Health Research Council** is working in collaboration with Nepal’s Ministry of Health, local Nepalese government authorities, schools, and health centers to develop a performance- and education-based intervention to tackle maternal mortality in 36 rural villages (Sharma et al., 2018). Researchers recognized that although literacy levels were low, the communities were rich in singing and dancing. Leveraging these musical resources, researchers invited local groups to create lyrics featuring key tips on prenatal care, set to existing, well-known melodies. These were performed in public spaces. The same key health care messages were also distributed to each household as illustrated wall-charts. Men’s and women’s knowledge of these practices was assessed at baseline and post-intervention in both control and intervention areas, and at twelve months post-intervention, knowledge of these health practices increased significantly, with the greatest improvement among the most illiterate members in the areas. Furthermore, participants reported that they continued to use and share the songs with their friends. The project also led the Nepalese government to increase its attention to additional obstetric care initiatives. The work points to the ways in which the pleasure and familiarity of traditional music can be used to communicate key information about health care in areas where literacy may be low.

**Project Hera**, funded by Canada Grand Challenges and run by Medical Search and Rescue Association (MEDAK), is a mobile phone application for Syrian refugee mothers under Temporary Protected Status in Turkey (<https://project-hera.com/en/>). Its goal is to educate mothers about prenatal care, childcare, and immunization, and to ensure that infants and young children are appropriately vaccinated. Mothers are first trained on how to use the app, maintain records of their child’s health, and get access to health care services they need. The application speaks to the possibility of re-purposing digital tools to serve the increasing numbers of young families seeking health care while in transition (Moritz, 2012). These same tools might also support audio-letters from family left behind, traditional stories, and songs from home – creating what one aid worker called “a portable sanctuary.”

Based in Australia and conducted by researchers at the University of Newcastle, the **SMS4dads** program is centered on a mobile phone application that provides expectant/new fathers with caregiving tips (for both the infant and the mother). It also provides fathers with information about stages in their infants’ social and biological development. A feasibility study on the program revealed that 92% of 520 fathers who participated in the study reported that the app helped them in their transition to fatherhood and 83% reported it helped their relationship with the infant’s mother (Fletcher et al., 2017; Rodger, 2017). Sample texts frequently contain



short poetic messages, suggesting that tiny songs and micro raps could help to build ties. With the support of the Australian government, the program is scaling up through multiple projects, one of which will work with aboriginal fathers in Australia.

**Parenting in Context** is an Action Research Lab at the University of Michigan’s School of Social Work. This lab focuses explicitly on engaging and including fathers from low-income families in the child care process. One project is **mDAD (Mobile Device Assisted Dad)**, another smartphone app for fathers. The mDAD app presents fathers with educational content (videos, pictures, and event logs) that helps them understand and track their infants’ physical and social development behaviors and markers. The research team conducted usability testing of the app with 31 fathers/participants. While the study was qualitative, results from interviews, usability tests, and focus groups revealed that participants perceived the app to be useful, engaging, and tailored to their status as fathers (Balu, Lee, & Steimle, 2018; Lee & Walsh, 2015). Additional smartphone-based models could easily use musical elements such as songs and lyrics to carry health and development content, to nudge behavior (e.g., to keep a well-baby visit), or to make an album that collects samples of a baby’s language development from babbling on to chanting and singing.



Photo Credit: Mikael Stenberg on Unsplash





## Case Studies: Physical and Mental Health

### Lullaby Projects

Drawing on generations-old practices, programs around the world are exploring how to use traditional and newly composed lullabies to build bonds in young families. Beginning in 2011, Carnegie Hall in New York launched its Lullaby Project, which has since spread locally, nationally, and internationally. Building on that foundation, musicians in the United Kingdom and in Greece have adapted the project to address distinct needs: parent-child separations due to incarceration and the stresses and cultural isolation of migrant families.

#### Irene Taylor Trust: Lullaby Project London

**Website** <https://irenetaylortrust.com/what-we-do/our-projects/special-projects/lullaby/>

**Sites**

- Praxis Community Projects, London
- Wandsworth Prison

**Participants**

- Migrant mothers (9)
- Fathers who are incarcerated (8)

**Since** 2017

**Evidence of Impact<sup>3</sup>** Level 2: Descriptive/qualitative

- Increased well-being (connections, sense of meaning, positive emotions)
- Increased proactivity (musical and social initiative)
- Increased reflection (perspective and positive coping mechanisms)

(Ascenco, 2017). The lullaby project: Areas of change and mechanisms of impact.

#### The Need and Opportunity

The Irene Taylor Trust brought the Lullaby Project to the UK for the first time in 2017, in partnership with The Royal Philharmonic Orchestra. From the outset, the project set out to encompass both mothers and fathers. “We wanted to honor as many kinds of parental relationships as we could,” says Sara Lee, Artistic Director. In this spirit, musicians from the Royal Philharmonic Orchestra and the Trust’s Music in Prisons project met regularly with a group of eight fathers at Wandsworth Prison, one of the largest male prisons in the UK, with capacity for 1,877 prisoners. Universally, Lullaby Projects allow participants to access and activate family ties, and the work with fathers at Wandsworth spoke particularly to the human consequences of enforced separation for families.

<sup>3</sup> Each program is coded by level of evidence of impact currently available

4 – large-scale and/or multi-site randomized control study(ies)

3 – comparison group, mixed methods, multi site

2 – descriptive/ qualitative, no comparison populations, suggestive of potential dimensions of impact

1 – successful implementation with clear outputs, but no external evaluation to date



### The Program

Reaching fathers with a Lullaby project meant stripping away culturally specific associations with the word lullaby to discover the human urgency at the heart of the genre. “When we started this work, I had to think hard about what a lullaby is,” recalls Sara Lee, Artistic Director of Music in Prisons and a participating musician. “We might think of it as a song you sing to get a baby to sleep, but when I tried to find a definition that would translate, it was a story, a story that you’d want to tell your children. So that is how we explained what we were there to do.” For the fathers at Wandsworth, the process of composition yielded songs that addressed the pain of absence, evoking how much these men had missed in the lives of their children.

“We are working with people who are often talked to or talked at,” says Lee. “So often these dads are just supposed to listen to whoever has authority. Asking them to speak, to share their feelings for their kids as we listen, is an important reversal of that dynamic.” Searching out a song can be tricky; musicians have to ask questions creatively. “When it comes to the dads, we don’t know exactly how long it’s been since they’ve seen their kids.” The practitioners who do this work well are skilled conductors of feeling. “We talk until we capture something essential: memories of their kids acting naughty, fears about relocation, how it feels to regret not being there.”

***So often these dads are just supposed to listen to whoever has authority. Asking them to speak, to share their feelings for their kids as we listen, is an important reversal of that dynamic.”***

**Sara Lee**, Artistic Director, Music in Prisons

Participating musicians also have to demonstrate keen compositional skill. They were charged with weaving flashes of memory, a few bars of a song recalled from childhood, or a phrase in another language into a song that guards humanity in its rough edges, a musically cohesive composition that is loyal to the integrity of the parent’s story. As in other Lullaby projects, fathers were offered a range of performance possibilities: they could sing their song to live accompaniment, they could read words they’d written, or they could invite someone to perform their work. Like all Lullaby projects, the work at Wandsworth culminated in performance for an audience composed of facility staff, family members, and invited guests. At the final show, Lee says, “The performers are the absolute focus. There is nothing hidden. It’s very emotional.” The fathers each received a recording of their work, a permanent token of expressive effort, which could be shared with the children for whom the songs were written.



### Scale and Outcomes

The Wandsworth Lullaby Project has been documented by a qualitative evaluation, which points out that Lullaby is an effective music-based intervention because it carries “a high sense of meaning” (Ascenso, 2017, p. 27). Lee’s question “What’s a story you want to tell your child?” is a prompt to a potent process. Most men involved reported an increase in confidence and a strong sense of accomplishment after persevering to complete and perform an original song. For these particular parents, whose life trajectories have been characterized by unpredictable challenge and whose ability to care for their children has been interrupted, their song’s potential to generate shared and “significant positive memories” (Ascenso, 2017, p. 27) could be an especially important foundation for connecting to children during and following separation.

Participants at Wandsworth activated interpersonal connections through their songwriting, both with music practitioners and with one another. Fathers described how the process, through encouraging emotional communication, “strengthened their relationship with their children, contributing to the development of a stronger bond” (Ascenso, 2017, p. 29). Participants identified feelings of joy, satisfaction, surprise, enthusiasm, and awe over the arc of creation and performance. While participants described “a sense of peace, freedom, gratitude and strength” (Ascenso, 2017, p. 28), lullaby writing also allowed them to acknowledge their sadness, fear, and regret. Among populations where traditional therapeutic interventions may be unfamiliar or stigmatizing, music-based projects like the Lullaby Project may open routes to practice trust, allowing people, as parents, to access and to express complex emotion.

### El Sistema Greece: Lullaby Project Greece

<b>Website</b>	<a href="https://www.fesg.us/thelullabyproject">https://www.fesg.us/thelullabyproject</a>
<b>Sites</b>	Facilities serving refugee and local families in metropolitan Athens
<b>Participants</b>	Refugee families and their allies: 5 mothers as soloists, performing with 200 children in national concert (2018)
<b>Since</b>	2016
<b>Evidence of Impact</b>	<p>Level 1: Proof of concept</p> <ul style="list-style-type: none"> <li>National concert featuring lullabies by refugee mothers, orchestral playing by refugee and local youth</li> </ul>



### The Need and the Opportunity

The Lullaby Project in Greece uses music to issue a public challenge to the rigidity of existing social definitions. In its first year, the project paired international composers with mothers living in refugee camps, setting up the lullaby composition process as a route to expand each participant’s “awareness of their value as human beings, motivating them to let their creativity free and developing their skills and secret wishes.”

***Music is the only language spoken by everyone in the world—if you can speak, you can sing. Music can speak to Greek citizens and to the newly arrived: it is a universal expression that connects us in humanity.***

**Anis Barnat**, Co-founder, El Sistema Greece

“Greece is a country of 10 million people and now also a country that has seen one million migrants since 2015,” says Anis Barnat, co-founder of El Sistema Greece. “The migrant population has changed the face of this country. Music is the only language spoken by everyone in the world—if you can speak, you can sing.” Barnat sees music as a tool for connection, speaking both to Greek citizens and to newly arrived migrants: “It is a universal expression that connects us in humanity.” Fleeing a home country alienates people from rights and routines, and arrival in a new place deprives families of meaningful social roles

and important life projects, curtailing activity and enforcing isolation. Barnat observes, “It is a difficult environment psychologically for these families—the arts can offer an escape for them. It is very important to have a platform for self-esteem, to have an audience, to be applauded. The emotional release is important and good for them, but it is equally important for the society to witness them.”

### The Program

El Sistema Greece promotes the social inclusion of vulnerable children, including refugees, in Greek and European society using the El Sistema model to provide collective music lessons with mixed age orchestras. Building on the growing role of Middle Eastern mothers and children in those orchestras, Barnat conceived of using the Lullaby Project as a way to draw mothers into participating as musicians, to showcase their voices beyond the boundary of the home. Beginning in 2017, the Lullaby project paired five mothers with five composers. Each pairing was a deliberate border crossing: the mothers came from communities in Kurdistan, Iraq, and Syria, while the composers hailed from Israel, France, Iran, and Greece. Everyone was challenged to enter a mutual experiment. While El Sistema Greece provided space and the services of a translator, the mother-composer dyads were left alone for nine months to do the intimate work of transforming personal narrative into song. According to Barnat: “They didn’t speak the same languages, or share the same cultural references, but they worked together and realized beautiful things.” The collaborations culminated in a concert held in the Stavros





Niarchos Foundation Cultural Center in Athens with 350 children playing on the acclaimed stage used by the national ballet and opera of Greece. The concert was streamed on social networks, creating a live co-concert with Carnegie Hall, where another Lullaby project was celebrating its culmination on stage.

A second cycle of the project expanded to include mothers living in Greek neighborhoods and incarcerated in prison. “We let the composers and moms do whatever they wanted with instruments at their disposal” resulting in “one hip hop, one world music, one classical, and one pop rock lullaby.” The public performance at the concert hall in June 2019 also featured student musicians and added the theatrical dimension of storytelling. The upcoming iteration of the project will highlight the work of local Greek composers, hosting a competition at the Athens Conservatory and assigning prizewinners the role of lullaby co-creator. The project’s emphasis on marginalized peoples will continue, with an invitation to a Spanish composer and a Roma mother who will work and perform in Athens.

The final performances offered mothers and their families a window into the possible fluidity of identity, both within and beyond the family: “We wish [mothers] to realize their role within the camp extends beyond maintaining their temporary household, and that they have the right to it; we also want to show them that others are interested, and willing to help with their expression.” The event “is a concert with tickets, in a beautiful space. The performance celebrates the creative capacity of mothers, regardless of their origins or current address, making a bold social statement about the rights of all peoples to the privileges of citizenship.”



Photo credit: El Sistema Greece

### Scalability and Outcomes

This example speaks to the adaptability and scalability of the model. In Greece, as in the United States, the work has spread from migrant camps to neighborhoods to women’s prisons. There is not yet any formal evaluation of Lullaby Greece. Project staff have embarked on a questionnaire for mothers, artists, children, fathers, and audience members, which they plan to refine and use to capture the experience. But such work is challenging: out of the five mothers in the 2018 project, only one remains living in Athens, while the others have continued their journeys into Europe.



### Best Practices from the Lullaby Projects

- **Projects demand local knowledge to flourish:** “You need to know your landscape; without it, good work is impossible.” Lullaby Greece works with people already expert in the communities they hope to engage, hiring a community leader who is also a migrant to do outreach for project participation. “That is the person who can locate mothers and children who are willing and who have an interest. We work with key people, already connected people, to help us identify participants.”
- **Build relationships and trust:** The creative relationship between musicians and participants matters. In Greece, mothers and composers worked together for as long as nine months. While the program was much shorter at Wandsworth, both participants and musicians reported attaining high levels of trust and connectedness during their sessions. Mutual engagement in music can strip away socially constructed layers that distance individuals from one another, such as cultural background, personal history, language, and status.
- **Expect musicians to be more than artists:** Musicians must bring a range of human and musical skills, and must have the ability to invest themselves in listening to others. Lullaby projects are highly relational in nature and demand spontaneous mutuality. They must be able to convey the “respect, trust and a sense of collaboration.” Musicians are responsible to open, rather than to hoard, the process of creation, even as they hold the work to high artistic and expressive standards: no clichéd melodies, vague lyrics, or sentimentality. Success requires “a strong output, a tangible and high-quality product” (Ascenso, 2017, p. 6).
- **Build partnerships:** All Lullaby projects are concentric circles of partnership: from the parent-child dyad at its center, to the relationship between musician and participant, to the larger circle or a group engaged in simultaneous creative effort. Their ultimate success, however, is predicated on productive organizational partnership: that of a music-making organization (which can provide practitioners who have human and musical skills) with visionary providers of social services (who nominate participants and provide an array of logistical support, including local knowledge and translation). Rehearsal and performance venues, recording facilities, evaluators, and journalists often complete the dynamic.
- **Culminate and celebrate:** Many music-based interventions credit musical immersion—turn-taking, personal expression, joint rhythmic practice, or sharing musical traditions—as the source of well-being outcomes. But the Lullaby Project insists that the culminating events of recording and performance are critical to impact, sealing in participants’ experience of meaning and allowing the lullaby to reverberate long after the creative process ends. In both Athens and London, the final concert for an invited audience and the resulting CD were strongly linked with the sense of accomplishment for participants, musicians, and staff. For participants, these songs, permanently inscribed by recording, constitute “a gift for the future.”



# #02

## Safe and Welcoming Public Spaces



Photo credit: WolfBrown

Music can create public spaces, bringing young families out into the lives of their neighborhoods, encouraging exploration and healthy movement, and inviting children and families to become owners and stakeholders in civic life (Doumpa, 2012). By 2030, 60% of the world’s population will be urban, meaning that the built environment and the soundscape of cities could be a major factor shaping contemporary childhoods, with new vulnerabilities for health, safety, and spatial isolation, but also new possibilities for increasing well-being, social integration, and cultural participation (Doumpa, 2012; Haider, 2007; Spenser, 2006). By using music to animate community rooms in buildings, public squares and parks, as well as pop-up spaces, cities can:

- Encourage families to come together to learn from and enjoy one another’s company, creating a sense of unity and mutual regard,
- Create community cohesion by connecting people across languages and cultures, music can be a powerful tool for community cohesion and social change (Sound Diplomacy, 2019),
- Foster cross-generational exchanges,
- Encourage outdoor play and physical activity, and
- Provide settings where children of different mental and physical abilities can socialize.

### Music in Low Income Housing and Neighborhood Centers

Too often public housing for the lowest income populations has been isolated, gray, and sterile—nowhere to grow up safe, curious, or joyous. But **Broadway Housing Communities** (BHC), an affordable housing developer in New York City, breaks through the assumptions and cost constraints to innovate new forms of affordable housing for low-income individuals and families, using the arts as a major strategy for innovation. At its recently built **Sugar Hill Housing Development**, Broadway Housing Communities created 124 units of affordable housing



...serving formerly homeless individuals and families. The building, designed by architect David Adjaye, is a combination of permanent housing, preschool education, and access to the arts for all via a community art gallery and a bottom floor and outdoor space devoted to the Sugar Hill Children’s Museum of Art & Storytelling. The Museum’s family-friendly performance spaces host music, theater, storytelling, and oral history events that invite young families to celebrate and perform the rich cultural heritages they bring from multiple cultures and migrations.

The Community Resource Center’s **Toy Bus** program is geared toward families in rural Canada who may not have ready access to arts institutions like their urban counterparts in cities like Toronto and Montreal. This is a mobile program that travels from neighborhood to neighborhood with play-based supplies and activities for families with children up to the age of 6 years. Early childhood care professionals lead activities including music, movement, and play which are all explicit components of the program. For example, their “music and movement” workshop encourages 2- to 4-year-old children and their parents/caregivers to play games involving physical movement, sing, play instruments, and even use rhythm as an agent to calm down.

*The building is an oasis of stability, learning, and imagination that supports cultural access and equity for children and families placed at risk by poverty. Every day the building and the programs it hosts challenge expectations about who can live in a museum tower and can attend a performance in a beautiful space designed for children and their families.*

**Jennifer Ifil-Ryan**, Former Deputy Director and Director of Creative Engagement, Sugar Hill Children’s Museum of Art & Storytelling



Photo credit: Sugar Hill Children’s Museum of Art and Storytelling

## Parks and Playgrounds

Outdoor musical games and play promote large-scale physical exercise that builds children’s balance, strength, and body awareness, and increases their skill and confidence in movement. The large-scale movements fostered during outdoor play can improve a child’s proprioception—the ability to sense their body’s orientation and its relation to objects in their environment. These activities can also spark collective activity among children. This can be accelerated through equipment and designs that promote music, chanting, and spontaneous music composition and improvisation (Dzansi, 2004; Marsh, 1995). The addition of sound equipment to outdoor environments can be especially effective for integrating young children with diagnoses like



Asperger’s and autism spectrum disorder into the social life of their schools and neighborhoods. Inclusive outdoor sonic playgrounds, with simple percussion instruments like chimes and drums, can bring differently-abled children together, enhancing both physical and social skills (Block, 2018). When peers and teachers are trained to engage and communicate with songs and instruments, the impact of these outdoor environments on all children’s interaction grows (Kern, 2004; Kern & Aldridge, 2006). Embedded into neighborhoods, such inclusive playgrounds can provide vitally important opportunities for a diverse range of families, including families of children with special needs, to be outdoors, meet other adults, and see their children flourish.

### Transformed Spaces

In growing numbers of cities, collaborative public arts- and play-based initiatives are popping up. Many of these projects are intentionally collaborative and participatory, engaging the community in design and construction, and also training adults in data collection/evaluation to track how the space is used and what more it needs (KaBoom!, n.d.). Frequently, these spaces contain informal performing spaces where musicians can jam and families listen. Others contain fountains or quiet spaces, offering respite from urban hustle and noise.

But music can also transform existing, even uninviting, spaces. In Dublin, Ireland, in the once dangerous and rundown housing estate, Fatima Mansions, The Ark, an arts education initiative, created an arts center that serves children and adults—ArkLink—from conjoined apartments. Among The Ark’s musical projects was Music With Your Children, an event where a teaching artist guided parents/caregivers in how they could incorporate musical activity through dance, song, and storytelling between themselves and their young children. A longitudinal qualitative evaluation demonstrated increasing well-being, health, and social engagement throughout the neighborhood (Tweedle & The Ark, 2007). In a similar spirit, Libraries Without Borders uses books, oral stories, and songs to turn boarded-up community centers and laundromats into performance spaces. [\(See the Case Study of Libraries Without Borders on page 62.\)](#)



Photo credit: Libraries without Borders





## Case Studies: Safe and Welcoming Spaces Libraries Without Borders

### Libraries Without Borders: Ideas Box

<b>Website</b>	<a href="https://www.librarieswithoutborders.org/ideasbox/">https://www.librarieswithoutborders.org/ideasbox/</a>
<b>Sites</b>	50 countries
<b>Participants</b>	<ul style="list-style-type: none"> <li>Families in under-resourced and distressed communities</li> <li>850,000 participants total</li> </ul>
<b>Since</b>	2007
<b>Evidence of Impact</b>	<p>Level 2: Mixed methods</p> <ul style="list-style-type: none"> <li>Establish safe spaces</li> <li>Build community ties</li> <li>Increased academic learning and social skills (older students)</li> </ul> <p>Peich, 2016: <a href="https://www.bibliosansfrontieres.org/wp-content/uploads/2016/04/etude_IDB_Burundi_en_15042016.pdf">https://www.bibliosansfrontieres.org/wp-content/uploads/2016/04/etude_IDB_Burundi_en_15042016.pdf</a></p>

### The Need and the Opportunity

Founded in 2007 in France to address a lack of access to knowledge and information in underserved communities, Libraries Without Borders has grown to include a diverse range of programming in 50 different countries. Though specific programs differ widely, they share the overarching goal of reimagining what a library can be, infusing it with innovative and flexible designs, grounding it in local contexts, and creating access to knowledge and information where there was none. As Adam Echelman, the Executive Director of Libraries Without Borders in the U.S., explains, “Most importantly, libraries are spaces for learning—all kinds of learning—but that learning doesn’t need to be confined to traditional library buildings with four walls and a front door. We want children and families to know that learning can take place anywhere.” The current reach of Libraries Without Borders is broad, with programs in diverse settings including refugee camps in Iraq and Greece, underserved areas of France, post-conflict villages in Colombia, and marginalized urban communities in the U.S.

### The Program: Ideas Box and Koom Book

Based on its experience in Haiti, Libraries Without Borders began working with the French designer Philippe Starck and UNHCR to develop Ideas Box—a “mobile ‘pop-up’ multimedia center and learning hub.” Ideas Box extends the approaches of Libraries Without Borders to the hardest-to-reach communities like remote villages, refugee camps, and communities in conflict zones that often have the least access to cultural and information-related resources. Practically speaking, an Ideas Box



consists of four large, weather-resistant cases that contain books, tablets or computers, a “pocket Cinema,” and participatory programming like games and simple instruments, arts and crafts supplies, and a tarp for creating a gathering space. The cases are highly mobile and easy to set up within 20 minutes of opening. It covers 330 square feet and leverages technology to fashion a multiservice community center containing a satellite internet connection with a server, a generator, 25 tablets and laptops, six HD cameras, a large HD screen, board games, arts and crafts, and a performance stage. The result is a community hub, gathering people and promoting cultural activities. The actual contents vary greatly depending on need in the local context, and they aim to support interactions and engagement, reestablish social ties, and build resilience and self-reliance. “It is our firm belief that you need both the materials and the programming,” says Echelman. In Puerto Rico, the Ideas Box includes local dance and drumming, collaboration with local university students for educational workshops, and the use of virtual reality equipment. In Somali refugee camps in Ethiopia, where the majority of families are nomadic herders and farmers, Libraries Without Borders and Save the Children opened two Ideas Boxes. These boxes emphasized the needs and rights of children, promoted learning, and provided safe spaces for reading, interaction, and play including singing and music (Lachal, 2015). Koombook (<https://www.librarieswithoutborders.org/activities/our-tools-and-methodologies/koombook/>) is a mobile digital library, a Wi-Fi hotspot that connects to devices and projects thousands of learning resources. The digital materials are pre-loaded and are designed by a content team in conjunction with the community and can include music-based activities (digital pianos, composition challenges, along with playlists of culturally relevant music, dance, or chant that children could perform or improvise over).

### The Role of Music

Music is woven throughout programming as both a vehicle for early childhood learning and a source of cultural connection. As Echelman comments, “When we think about increasing access to information—you can’t do that with just talking, reading, and playing. You also have to be singing. Our programs also engage children with the ‘music’ of their surroundings. We ask, ‘What do you hear?’ and turn those sounds into rhythmic games, dances, and motions to heighten children’s awareness of the world around them.”

### Scale and Impact

To date, 59 Ideas Box kits have been implemented throughout the world, enriching the lives of more than 850,000 refugees, displaced, and vulnerable people. To understand the impact of its work, Libraries Without Borders has carried out several evaluations. Qualitative results found that over time, people increasingly used the Ideas Box and the spaces in which they were located, suggesting increased familiarity and trust with the kits and spaces. This use, in turn, increased social connections, and improved academic performance and attendance among children. A quantitative follow-up study reinforced those findings, showing a 23% greater academic improvement among these children as compared to peers attending a “classic school setting” (Peich, 2016).



### Libraries Without Borders US: Wash & Learn

**Website** <https://www.librarieswithoutborders.us/wash-learn-initiative>

**Sites** 8 U.S. states, with multiple sites in each state

**Participants** Families in under-resourced communities

**Since** 2016

**Evidence of Impact**

Level 3: Mixed methods, treatment and comparison sites

- Increased access to literacy materials for young children
- Increased parent-child early literacy interactions
- Parents learning literacy strategies from visiting librarians
- Laundromats become community centers

[http://toosmall.org/blog/body/Laundry-Literacy-Coalition-Pilot-Evaluation\\_Executive-Summary.pdf](http://toosmall.org/blog/body/Laundry-Literacy-Coalition-Pilot-Evaluation_Executive-Summary.pdf)

### The Program

People think of libraries as books, story time, librarians, and maybe access to computers. But it turns out that it is the work they do, not the wide steps and stacks, that matter. Before launching Wash & Learn, the team piloted programs in a variety of public spaces before discovering that laundromats were ideal for expanding family play and literacy. The ordinary boredom and idleness of hours waiting to wash and fold provide opportunity for programming and learning. Since people return to laundromats weekly, often at the same times, there is time and space for relationship and trust-building. Moreover, laundromats are family institutions—parents often bring their children, having no other childcare options. Finally, they are 24/7 spaces that can serve as a safe harbor and fill a gap in resources and enrichment when other locations are closed.

*I love the literacy area and really appreciate the librarians’ patience and love. I think there are few places like this in our community. I grew up here and I think the literacy corner is very important for this community We come here every other week, and now he has something to do. He asks me, “Mommy, can we go play at the laundromat?”*

**Parent**

*The most powerful engagement happens when a librarian facilitates story times, sing-alongs, and other activities for kids and families.”*

**Adam Echelman**, the Executive Director of Libraries Without Borders in the U.S.





Though each site is unique, Wash & Learn programs share several common characteristics: they partner with the local community to plan the space and activities; bring librarian-facilitated early childhood programming to the laundromats; incorporate other programs of community interest, like WIC health services or dental health workshops; and facilitate access to technology through wall-mounted tablets and internet access for laundromat users. The end-product is two-fold: “We try to ensure that there are materials and infrastructure that are always there in the space so people can use them whenever they happen to be there and so the space becomes something else. Savvy librarians use the whirl of the machines, the magic of soap and water, and the mix of spinning shirts, sheets, and sock colors to teach, sing, and share.”

### Scale and Outcomes

The first Wash & Learn program launched in the Bronx, NY in 2016. Since then, based on the development of a clear design and starter kits, the program has expanded rapidly to 8 states, each with multiple sites. In 2019, 20 laundromats in Chicago hosted a program. An initial evaluation found that while the space alone had an important effect on promoting literacy in the broadest sense—children exploring materials, playing or reading together—the most powerful outcomes came from bringing in librarians who were able to build bridges and model interactions that allowed parents to be part of what was being shared or created (Laundry Literacy Coalition, 2019). “The most powerful engagement happens when the librarian facilitates story times, sing-alongs, and other activities for kids and families.” Their presence fosters a greater sense of belonging and investment on the part of families, amplifying the program’s effects for all involved.



Photo credit: Promundo Sri Lanka



### Best Practice Lessons from Libraries Without Borders

- **Build community participation and trust first and foremost:** As Echelman explains, “The project will only work if the community members help plan and want to participate and use what we’re offering, and if the program reflects the local community.” Even after involving the community in planning, there is still a process of gaining trust. “When we first transform spaces, kids will often immediately gravitate towards them. But to really engage parents, we need people on-hand to talk to parents and invite them to participate. And when they say no, you come back the next week and you invite them again. It’s really all about building trust.” The importance of local relevance, the flexibility to adapt to the local context, and building community trust were paramount to the success of both Wash & Learn and Ideas Box programs.
- **Embrace iterations:** “When we first started our programming in the U.S., we tried to offer it in hospital waiting rooms and it was not successful. People were too anxious to engage in activities, and we couldn’t build relationships over time. These experiences led us to laundromats.” The flexibility to try, fail, learn, change, and improve makes for a much stronger program in the end.
- **Depend on human interactions to create impact:** Though the resources created concrete access to knowledge, information, resources, and materials, both Wash & Learn and Ideas Box kit programs created the greatest change through the combination of their resources and human interactions. Face-to-face engagement ignited the potential of materials and enhanced social well-being through interactions.
- **Transform space to transform expectations:** The physical transformation of a place not only carves out space for learning, interaction, and growth, but it also can transform the expectations people have of themselves. When laundromats became learning environments, their inhabitants also became learners, singers, and storytellers. When the Ideas Box kit opened in post-war Colombian villages, a calm space free of conflict was born, as were individuals accessing outside resources and reconnecting as a community. Inclusive public spaces that integrate music and culture can spark children’s creativity, interactions, development, and expectations of themselves.



# #03

## Engaged Learning



Most of children’s learning, especially in their earliest and most formative years, comes from exploration and play (Parlakian and Lerner, 2016). This certainly includes music, in its broadest sense (vocalizing, body percussion, movement, and dancing). Much of this can take place on the kitchen floor or outside in a yard, but there are also ways to support and expand this kind of learning within institutions and in other informal learning spaces—sidewalks, empty lots, or community centers, bringing together children of different ages, backgrounds, and languages.

Making music a major strand—rather than an occasional event—in early education for infants and toddlers offers young children opportunities to:

- Develop verbal and non-verbal communication skills, including word play and figurative language,
- Learn content (numbers, letters, place names, days, and times),
- Practice self-regulation, as in taking turns and following directions,
- Experience positive emotions (delight, anticipation, excitement, and humor),
- Think about human experiences portrayed in lyrics,
- Cooperate and build relationships in ensembles, and
- Experience self-esteem, self-confidence, and self-efficacy when mastering simple instruments, rhythmic patterns, songs, and musical games.

Though we think about it less, music may also offer benefits to other members of a family. For instance, singing and rhythm games are ways for older siblings to practice what they know and engage brothers as well as sisters in the work and pleasures of childcare. Music and dance may also offer parents a welcome chance to see their young children smile and laugh.



## Child-focused Programs

Since 2000, the **Happiness Project** has started 30 labs for asylum seekers across the Netherlands, working with children in different age groups who participate in weekly workshops, composing and recording original music, making theater plays, movies, and art.

Using a similar model, the Lego Foundation, Sesame Workshop, and the International Rescue Committee have teamed up to create play-based learning centers in the countries around Syria, along with the Bangladeshi relief organization, BRAC. (See the [Play Lab Case Study on page 81.](#))

*It is about creating value, something for the children to express their feelings, dreams, ideas and stories. Something that has value and fosters dignity.*

**Happiness Project website**

Many youth orchestra and community music schools have adapted their programs to serve younger children. In Brazil, **Alegro Music**, modeled after the widespread El Sistema program, works with young children from marginalized communities through music education. Also in Brazil, **AfroReggae** works with young people through music, dance, and art, thereby increasing their involvement in “meaningful and creative” activities. **Oficina Escola de Lutheria da Amazônia – OELA** works with young children in the Amazon region, teaching them to make and use instruments out of forest materials. **Growing with Music** is a UNICEF-led life-skills program for young children in Costa Rica that utilizes music and art as expressive and therapeutic tools.

A number of these programs focus on using music to help children address the effects of poverty, migration, civil war, and other traumas. For example, UNICEF runs the **Musiqati** program, geared specifically toward Syrian refugee children. Save the Children’s **HEART (Healing and Education Through the Arts)** program is for children from the age of 3 onward. It operates across 22 countries in Asia, Africa, the Middle East, Eastern Europe, and Latin America. Teachers, therapists, and educators guide the children’s process of discovery and learning through the arts. The program utilizes both music and play-based tools such as craft supplies. Additional educational/therapeutic/expressive music programs for young children are **Cazuca Dreams On** and **Fundacion Sirenaica** in Colombia, **Champey Academy of Arts** in Cambodia, the **Isipethu Sothukela Project** in South Africa, the **Soma Children’s Orchestra and Chorus** in Japan, and **Music Basti** in India. In South Africa, **MusicWorks’** Early Childhood Development Program focuses specifically on 2- to 6-year-old “at-risk” children, working with them to unlock self-awareness, key social-emotional skills, and creative joy. (See the [MusicWorks case study on page 70.](#))



## Whole Family Learning

**Musicians Without Borders** works in Kosovo, Palestine, Greece, Northern Ireland, Germany, Rwanda, Uganda, El Salvador, Italy, and the Netherlands in order to mitigate the damaging effects of catastrophe in those communities. As the organization’s website states, “On the ground, this can sound like rock music, Burundian drumming, rap music, a cello sonata, or a stick hitting the bottom of a bucket. It’s not up to us to decide what the music will sound like. Our role is to create access to music making that is guided by our working principles of safety, inclusion, equality, creativity, and quality. This approach opens a musical space that enables people to communicate and share.” Such an approach helps children along with their families negotiate trauma by utilizing a particular community’s rich cultural resources in order to heal.

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**Musicians Without Borders Website**

**Rise2Shine** is a childcare center serving some of the poorest children living in earthquake damaged neighborhoods of Port-au-Prince, Haiti. The program provides nutrition, health, and educational care to over 50 children. Singing is a pillar of its curriculum. The teachers use songs as a way to celebrate and hold onto local history and traditions, as a way to learn the three languages (Creole, French, and English) the island uses, and as a way to acknowledge the spirit and resilience of the community. The school’s music faculty boasts a noted Haitian-American jazz singer who comes several times a year to teach (and to be inspired by a community where music is such a vital part of everyday life).

In Ghana and Uganda, **Lively Minds** is a women’s empowerment-focused organization. The program trains young mothers (who often have not been able to access formal education) to operate low-cost “Play Schemes” for preschool children. They teach one another and their young children through play and creativity, art, and music based on local traditions. The organization works with local governments, using a train-the-trainers approach to ensure the quality and continuity of the program. An initial evaluation describes major gains in school readiness, children’s health, and play at home.

**Promundo** is a global organization promoting the importance of fatherhood. One among many of Promundo’s initiatives is Program P, conducted in Nicaragua, Brazil, Indonesia, Rwanda, South Africa, Sri Lanka, and Lebanon. The program encourages fathers to be more active and involved in childcare. Results from an impact evaluation conducted on the program in Rwanda revealed that two years after participating in the program, men, compared to themselves at the start of the program, were almost half as likely to use violence against their female partners and were also more likely to spend almost one hour more per day doing household chores. While music is not an explicit component, it is easy to see how it might combine with play-based learning and activities, strengthening the tie between father and child, and between father and mother. (See [Fathers as Music Makers, page 27.](#))





## Case Studies: Engaged Learning MusicWorks and Kaleidoscope

### MusicWorks

**Website** <http://musicworks.org.za/>

**Sites** Cape Flats, South Africa

**Participants**

- Teachers in training
- Pre-school children (490)
- Families

**Since** 2002

**Evidence of Impact**

Level 1: Proof of concept

- Increased access to music therapy, especially for children experiencing trauma
- Developing initiative, playfulness, and creativity in children
- Training teachers to use music as a major tool for developing children’s capacities
- Sharing the use of music between school and home

### The Need and the Opportunity

In 2002, South African music therapists Sunelle Fouche and Kerryn Torrance noticed a stark inequity in access to music therapy services. The public sector health services—where the vast majority of South Africans and virtually all who are poor or marginalized received health care—offered no music therapy. At a time when more and more children were being orphaned by the HIV/AIDS crisis and gang violence was on the rise, they saw an increasing need to reach these children.

***While these communities are deprived of much, music very much exists, so we focus on how South Africans have used music in their everyday lives, making it central to what we do.***

**Sunelle Fourche**, Co-founder of MusicWorks

With this goal in mind, they founded MusicWorks, with the stated mission “to join with communities to facilitate connection, healing, expression and restoration by offering direct music interventions and the training of practitioners.” Programming was particularly targeted to the Cape Flats communities surrounding Cape Town, which experienced high levels of violence and trauma and where the arts were rarely taught. According to Ms. Fouche, as they deepened their work in communities, they “realized



that music can be powerful outside of the therapy setting and that in South Africa, people have always used music for healing and growth.” At that point, MusicWorks expanded its mission and offerings and began working with local South African musicians, and developed a three-pronged program: (1) Music therapy, with a focus on children experiencing trauma and children with disabilities; (2) “Music for Life,” which provides children ages 6-13 with South African-inspired afterschool music and dance programming and performance; and (3) the Early Childhood Development (ECD) program, a training program that transforms pre-primary school educators into facilitators of music-infused, child-led early childhood education focused on music’s potential to develop children’s social, emotional, and creative capacities. The goal is to engage the children and educators by opening up the possibilities of “communicative play through music” and encouraging open-ended, child-led techniques.

### **The Early Childhood Development Program**

Zandile, a MusicWorks-trained early educator, leads a group of preschool students through the dusty streets of Sector B, RR Section of Khayelitcha, Cape Town, South Africa. As the group makes its way to the library, Zandile and the children sing and march to the rhythm. The children are engaged, joyful, and focused, laughing as they go. Inside the library, the children form a circle, still singing, their bodies still moving to the beat. Kids take turns jumping to the center of the circle and adding in their own movements to the song. One girl enters the middle with hands on her hips and a big smile, grooving her hips back and forth while chanting. Zandile and the other kids join in as she becomes the leader of the group, adding her own ideas and words

*I love the tambourine. A child takes initiative in tambourine because they would bang the tambourine louder or softer. It engages everyone and they’re expressing their feelings and they get eager to Participate in the ring...I allow a space for them, they jump in and do it in their own way.*

**Sunelle Fourche**, Co-founder of MusicWorks

to their song. “I love the tambourine. A child takes initiative in tambourine because they would bang the tambourine louder or softer. It engages everyone and they’re expressing their feelings and they get eager to participate in the ring...I allow a space for them, they jump in and do it in their own way.”

Zandile is teaching in the Cape Flats, some of the most marginalized communities surrounding Cape Town, plagued by poverty, gang and family violence, the after effects of the AIDS crisis, and a lack of basic resources and opportunities. Through MusicWorks, she is providing preschoolers with fundamental learning experiences they would otherwise be without. In that spirit, the program combines music therapy and indigenous music—drawing on the best practices of each. The underlying framework of its early childhood development program includes three key principles: (1) Validating kids and their experiences, (2) encouraging kids to take Initiative, and (3) ensuring playfulness and creativity remain central (“VIP”). Educators are trained to encourage children to lead music-making



activities, to allow for spontaneity, and to practice their own song creation within the classroom.

The intensive training, which operates over a period of approximately six months, consists of three phases. The first phase is a two-day workshop that uses doll-making to engage participants in a tangible, South African-based arts activity while they reflect on the role music has played in their own lives. This allows educators to focus on themselves and how their own social and emotional lives have been affected by music. By first validating the role of music in their own lives, educators can then think about how to facilitate music's role in the lives of young children. Phase Two includes practice-based workshops, in which participants learn about and discuss the program's VIP framework and practice activities they could use in class. The activities encourage improvisation and child-led music play and are aimed at ensuring educators are well versed in and comfortable with this open-ended approach. "We do a lot of work teaching the participants how to create their own songs so that they can personalize sessions and incorporate an improvisational approach with the kids," shares Ms. Fouche.

The final phase includes mentoring and support within the classroom to incorporate music making activities and play. This mentoring phase is a shared celebration and implementation of what's been learned. Trainers help educators create these inclusive, playful, music-filled spaces within the actual ECD environment as a culmination of their work.

For many ECD teachers, connections to children extend beyond the classroom setting. Zandile explains, "We do home visits because we transfer the skills to the caregivers . . . to play with their child and validate children, and we always encourage them to show a child what to do rather than teaching a child what to do." When Zandile arrives for a home visit, she greets the mother and tells her she's stopped by to play. Home visits allow teachers to ensure that music permeates the boundaries of the program and enters homes and the wider community.

### **Scale and Outcomes**

Starting in 2011, the program enrolled approximately 15-20 educators in each training phase, each of whom worked with groups of 15-20 children, reaching 300-400 children and their families. Since educators work with new children each year, the effects multiply over time as new children tap, strum, yelp, sing, shimmy, and dance with their friends and teachers.

No formal evaluations have been conducted thus far of the ECD trainings. Anecdotal and qualitative evidence suggests that the program created safe and beloved spaces of music and play for hundreds of children in the Cape Flats. In these musical spaces children have permission to be playful—one of the most powerful learning tools of early childhood. To understand its impact on educators, MusicWorks is partnering with researchers from the University of Pretoria to develop an evaluation of the program, likely looking both at the effects of the program on teachers' use of music within the classroom as well as the program's impact on children's social and emotional learning.





### Settlement Music School: **Kaleidoscope**

**Website** <https://settlementmusic.org/preschool/>

**Sites** 2 pre-school sites in Philadelphia, PA, USA

**Participants**

- Preschoolers (84 annually)
- Teachers

**Since** 1990

**Evidence of Impact**

Level 4: Multiple randomized control design

- Vocabulary gains (Brown, Benedett & Armistead, 2010)
- Increased positive emotions (Brown, & Saxe, 2013)
- Lower levels of stress (Brown, Garnett, Anderson, & Laurenceau, 2017)
- Greater school readiness (Brown, Garnett, Velazquez-Martin, & Mellor, 2018).

#### The Need and the Opportunity

In Philadelphia, approximately 26 percent of population lives in poverty, making it the poorest large city in the US, and the largest to be excluded from a national trend of economic recovery (Murphy, 2018). Almost a third of the city’s infants and toddlers live in poverty and inequality of family income is pronounced with the poverty rate among children reaching 79% (Packtor, 2018). These children face escalated health risks (including asthma, obesity, and lead exposure) and social privation: higher exposure to crime, limited access to quality schools, depressed opportunity for employment, and a higher likelihood of justice-system involvement (Ratcliffe, 2015; Pew Charitable Trusts, 2019). This network of disenfranchisement creates what Dr. Ellie Brown, Professor of Psychology at West Chester University, calls a “poverty ecology.” Brown’s work explores this ecology, aiming to identify factors that can counteract the persistent pressures of poverty. In a 12-year collaboration with Kaleidoscope Preschool, Brown and her colleagues have built an evidence base that attests that arts-based interventions can help the city’s poorest children to flourish in the face of stress.

#### The Program

The Kaleidoscope Preschool Arts Enrichment Program, launched in 1990 by the Settlement Music School, enrolls 84 children aged 3 to 5 across two sites in Philadelphia. Ninety-five percent of students are enrolled through Head Start, a national school readiness program for children under 5 from low-income families. Across the two sites, six accredited arts teachers offer children a total of 12 45-minute arts classes weekly, in music, dance, and visual art in a fully equipped studio space. Curriculum is designed around broad themes—“Patterns,” “Change,” or “Groups”—which imbue curriculum in both



homeroom and arts classes, allowing staff to “teach one thing many ways,” according to Tarrell Davis, Director of Early Childhood Programming at Kaleidoscope. Classrooms are extraordinarily diverse across race, culture, and income. Children enter at age 3, with varying levels of cognitive and social development. Some have learning delays, or impairments in speech, vision, or hearing. Teachers are trained to be alert to each child’s needs. While a music class exposes children to listening and playing music, it also reinforces core domains of language, literacy, science, and math. Arts classes are active, fluidly moving between teacher- and student-directed activity, alternating group and individual tasks. Every lesson is designed to help children notice and attend to their own emotional state: modifying their voice volume, taking turns, or sharing physical space.

Kaleidoscope engages families starting with a detailed intake and screening of students that lasts through the first month of school. Staff ask incoming parents to describe how their own goals are evolving as their children enter school, and then work to provide resources to assist parents to realize their aspirations. Parents are invited to a year-long calendar of field trips, celebrations, and performances, which provide snapshots of their child’s growth in the program. For low-income families who are often mandated into bureaucratic systems, these invitations matter, and this kind of early engagement can kindle a vital commitment to participate in a child’s education. The mix of family cultures in the classroom has evolved with the city’s population, and, at Kaleidoscope, the arts are a conduit for children to “express individual realities.” The program’s open call to parents to share their traditions has led to a regular Spanish story hour, a father’s band performing on Cinco de Mayo, music classes with lyrics in multiple languages, and a celebration of Diwali complete with Hindu chants.

### **The Role of Music**

Children who cope with the harsh ecology of poverty may come to preschool with gaps in cognitive skill or emotional regulation, which prime them for frustration, negative emotion, and distress. The combination of verbal and nonverbal processes in a music class is an “opportunity for a child to bootstrap learning,” notes Dr. Brown. “The arts may provide a chance to excel or to take pride in their work that can transfer to engagement across school domains.. Kids peak differently. The arts may be the place where some of them learn best and first.”

***Arts classes can offer zones of respite by providing alternative ways to join in, to learn, and to experience success. The combination of verbal and nonverbal processes in a music class is an opportunity for a child to bootstrap learning. The arts may provide a chance to excel or to take pride in their work that can transfer to engagement across school domains.***

**Dr. Ellie Brown**, Professor, West Chester University



Music classes offer many occasions for teaching self-regulation,” says Davis. “Let’s stop our voices when the music stops” or “Now let’s sing softer and softer” are simple examples of how a musical instruction can direct children’s attention towards deliberate shaping of their own action. Music can invite children at every developmental level to participate, from recognizing a melody, to clapping along, to moving through space. For students with varied learning needs, Davis notes that music class is especially inviting: “Music is the place that children find it easiest to join in. The components of music—the balance, beat, and sway are soothing. The rhythm in music provides a reliable support for regulation.”



Photo credit: Kaleidoscope

### Impact and Scale

Kaleidoscope is unusual among early music and arts for its rigorous observational and neuro-physiological studies of program benefits. The first study of Kaleidoscope demonstrated that children in the program showed three times the gains in receptive vocabulary, as measured by the Peabody Picture Vocabulary Test, compared to peers attending a matched comparison site that was not arts-integrated (Brown, Benedett, & Armistead, 2010). A 2013 study showed an association between arts experience and positive emotion, and between the arts and self-regulation. Kaleidoscope students experienced greater incidence of interest, happiness, and pride in music, dance, and visual arts classes, as compared to classes in their homeroom. Additionally, children at Kaleidoscope showed 60% more observed positive emotions than peers attending a comparison preschool. Measured at intervals across the school year, children at Kaleidoscope showed greater growth in teacher-rated levels of positive and negative emotion regulation (Brown & Sax, 2013). In another study of 310 participants and their primary caregivers, children at Kaleidoscope were randomly assigned by preschool class to different schedules of arts and homeroom classes. Kaleidoscope students showed decreased levels of the stress-indicating hormone cortisol following music, dance, and visual arts classes compared with regular classroom instruction (Brown, Garnett, Anderson, & Laurenceau, 2017). The most recent study demonstrated that children in Kaleidoscope showed greater gains in school readiness compared to their peers in a Head Start program that did not include arts classes (Brown, Garnett, Velazquez-Martin, & Mellor, 2018).



### Best Practices in Engaged Learning

- **Structure musical learning for all:** The most effective lessons are “structured so that all children derive benefit.” In a well-conceived music class, “children of every skill or developmental level can hook in,” observes Ellie Brown.
- **Insist on teacher-musicians:** Teachers must be able to engage children in active music making and must understand what works for children of different ages. A deep musicianship is required so teachers need a sophisticated enough understanding of music to be able to maximize its potential for children in the moment.
- **Explore complementary ways of working:** MusicWorks’ model draws on formal learnings from music therapy as well as the rich cultural traditions of South African dance and music, creating a synergy; Kaleidoscope draws on arts practices, child development, and social science research.
- **Call out the child in teachers:** If play lies at the heart of music’s transformative power, then teachers need to wiggle, jump, chant, hum, and sing along with their children. As much as traditional musical skills, they need the courage to improvise, arrange, and explore.
- **Connect home and program through music:** Kaleidoscope draws on the music of its families and invites parents in. MusicWorks’ teachers make home visits for a reason: they want to export the possibilities of musical play to front yards and kitchens. Both programs want parents to experience their children’s energy and capacity to learn and imagine. They know that if families join in, their impact multiplies.
- **Invest in rigorous research:** Kaleidoscope’s sustained partnership with a scholar has produced rigorous evaluation of its programming, including mapping underlying neuro-physiological mechanisms through which arts-integrated curriculum works to enhance learning and reduce stress. Such research is a tool for advocacy and can advance public and private investment in arts and music-based curricula for young, economically disadvantaged children.



# #04

## Inclusive Cultural Opportunities

Article 31 of the United Nations Convention on the Rights of the Child (1989) reminds us: “Children have the right to relax and play, and to join in a wide range of cultural, artistic, and other recreational activities.” Yet in many settings access to culture is unevenly distributed, leaving the poorest children on the outside. Music can be a tool to change that. In this section, we highlight ways in which institutions represent and sustain cultural practices familiar to the communities they work in, and/or work together with communities in order to give them a platform for expression and the opportunity to contribute to the cultural fabric of their surroundings.

In this spirit, local and national governments are crafting policies and strategies designed to change who has access to cultural events. For example, **Creative Scotland** is developing national policies based on the belief that everyone, at all ages, should be engaged in creative activities. These policies are supported by funds distributed from the national government and lottery. **Cool Culture** in New York City partners with over 450 schools and early education programs annually to provide more than 50,000 historically marginalized families and their young children with free, unlimited admission to over 90 premiere performance spaces, museums, historical societies, zoos, and botanical gardens. The program provides a renewal pass, good for up to five people, free to any family with one or more children enrolled in a participating early childhood center or elementary school in the city. The **Maternal and Newborn Survival Initiative (MANSI)** program in India is a public-private partnership among the Government of Jharkhand and multiple organizations including the American India Foundation, GBC Health, the Clinton Global Initiative, and Tata Steel Rural Development Society. Begun in 2009, The MANSI model is a “low-tech” intervention that deploys local female community health workers called Sahiyyas to work with families during pregnancy, at birth, and after birth to improve maternal and infant health. Maternal and Newborn Health Mobilizers (MNHM) worked with performing artists to capture families’ attention using Seraikela Chhau, a traditional and well known dance drama. Through these performances, the artists increased families’ awareness about safe delivery



Photo credit: Ian Macharia on Unsplash



and care of infants and their mothers. While this was a short-term, low-dosage intervention, it highlights how public-private funding for performing arts can impact of existing health and wellbeing interventions in communities. (Also see the example of Health Research Council on Nepal on page 51.)

## Inclusive Performances

Performing arts organizations, typically targeted to older, paying audiences, are moving to include performances where entire families can experience music. The multiple purposes of such programs are for families to enjoy performances together—sing-alongs, musicals, traditional stories, even operas—in order to develop the shared habit of using the facilities of their neighborhoods and cities, and for children, early in life, to learn they have a right to culture. Institutions like **Musical Rumpus** and **BabyOpera** are using non-conventional spaces, mixed media, and participatory models to invite families, infants, and toddlers into exploring music, performance, and play together. Where such performances are free and occur in inclusive public spaces they invite everyone into a moment of sharing cultural heritage.

At the same time, presenters are also exploring how to open these performances to families whose members have special needs, ensuring that they, too, have access to public spaces and culture. A new center, **TouchBase Pears**, in Birmingham, U. K. built by **Sense**, an organization supporting people with complex disabilities, is pioneering and spreading the development of sensory arts practice for people with complex disabilities.

*We believe that no one, no matter how complex their disabilities, should be isolated, left out, or unable to fulfill their potential.*

**Sense website**

## Media: Broadcasting, Apps, and Technology

Throughout the world, there is a growing question about how broadcast and digital media become media for agency and exploration, rather than passive consumption and the shaping of young minds by international brands. The Sesame TV program, **Ahlan Simsim**, produced locally in Jordan, provides one example. It features an Arabic-speaking cast who model respect, inclusion, and equity, aiming to build children’s language, reading, math, and social-emotional skills. It offers its programming digitally, and the initiative includes SMS messaging and digital lesson plans for allied content. The Ahlan Simsim project partnership has generated strong funding, allowing the partners to identify the goal of reaching 9.4 million children in Iraq, Jordan, Lebanon, and Syria. Though technology’s potential is linked to novelty, this example illustrates how “vintage” technologies like television remain powerful conduits for family well-being. (Also see description of health programs carried on radio and mobile phones on pages 50-52.) In a similar spirit, the MacPhail Center for Music in Minneapolis, Minnesota, a community music school, uses the internet to broadcast the music activities of its “Sing, Play, Learn” curriculum to preschool and elementary classrooms, guaranteeing that any participating school has access to highly trained instructors, teaching artists, and performances that would otherwise be beyond their reach. Though this is a fee-based program in the U.S., it suggests how a local or



national government, working in partnership with a conservatory or performing arts center, could embed high-quality early music learning anywhere there is connectivity.

Smart phones and tablets present a second challenge: how do they become tools of inquiry and invention? At the moment, what we know is that it is possible to design playlists, animated songs, and even simple composition and improvisation applications that children under 5 can use and enjoy. At the same time, there is growing concern about the effects of prolonged screen time for young children (Strasburger, Jordan, & Donnerstein, 2010; Tandon, Zhou, Lozano, & Christakis, 2011), as well as the potential for technology to homogenize and transform music into a passive and private activity, rather than a lively and social one. In the face of growing concern about the effects of screen time, are there ways to link technology and music in ways that increase activity and creativity?



Photo credit: Play Lab



### Best Practices in Music and Technology in Early Childhood

- **Use the studio in your pocket:** Mobile phones, the most widespread of technologies, can be used to record, store, and transmit music from almost anywhere to anywhere. But they should be a studio in your pocket, not the source of passive watching and listening. These devices (and others) should enable children to make active musical choices: what instrument, which pitches, what rhythm, when to sing, and when to play (Koops, 2012; O’Mara & Laidlaw, 2011). Apps should be an opportunity to be a creator, an adventurer, and an inventor of new musical possibilities. In this regard, music apps have much to learn from the high levels of interactivity evident in photography and storytelling platforms that allow families to create and personalize content.
- **Familiarity engages:** Research links children’s music preference to familiarity. While purposeful exposure to a diversity of musical genres and traditions may have long-term value, the musical language a child is born into or knows well provides the most compelling entry to engagement (Demorest & Schultz, 2004; Peery & Peery, 1986).
- **Human interaction matters:** According to Hall and Bierman’s (2015) meta-review of 48 technologically delivered parenting interventions, the use of virtual tools, when paired with human interaction (real time mobile phone coaching, texting, video conferencing, or email with a known other), shows “considerable potential” especially “when these contacts are embedded strategically to support an evidence-based parenting program.”
- **Practice and transfer make it real:** Practitioners suggest that apps should support a child’s ability to link their digital experience to hands-on, real world activities: musical play, improvisation, and performance with others (Nardo, 2018). These platforms should be a jumping off point, rather than a self-enclosed world.
- **Save those sounds:** Indigenous musical traditions, like indigenous languages, are vulnerable. Technology—if used well—can guarantee that children hear and know the chants, oral epics, and rhythms that are a part of their right to intangible culture of their parents, grandparents, and ancestors (UNESCO, 2003).







## Case Study: Play Lab Models – Heritage through Sound, Sight, and Touch

### BRAC Institute of Educational Development: **Play Lab**

<b>Website</b>	<a href="https://www.bracied.com/brac-play-lab/">https://www.bracied.com/brac-play-lab/</a>
<b>Sites</b>	<ul style="list-style-type: none"> <li>• 236 sites in Bangladesh</li> <li>• 80 locations across Tanzania and Uganda</li> </ul>
<b>Participants</b>	<ul style="list-style-type: none"> <li>• Teachers in training</li> <li>• Pre-school children, 3-5</li> <li>• Families</li> </ul>
<b>Since</b>	2015
<b>Evidence of Impact</b>	<p>Level 1: Proof of concept, developing measures for:</p> <ul style="list-style-type: none"> <li>• Playfulness</li> <li>• Knowledge, attitudes, and practices</li> <li>• Interactive social play</li> <li>• Mental health and resilience in refugee children</li> </ul>

### The Need and the Opportunity

When the Play Lab Project was launched in 2015 in Bangladesh, BRAC Institute of Educational Development (BRAC IED) took on the traditional local script of childhood that prizes conformity and quiet. “The idea . . . that [children] should express themselves did not exist,” says Erum Mariam, Executive Director of BRAC IED. At the heart of the program was the question: could a curriculum based on play help children to learn deeply, developing habits of mind like curiosity and adventure that would last them a lifetime? Following this conviction, Mariam and her colleagues introduced the idea that development depends on children expressing themselves and built a program founded on a play-based path to learning. As Mariam emphasizes, “It is critical that children be allowed to be childlike. They need space in which they are not inhibited, so that they remain enthusiastic, creative, and curious. This learning is their foundation for life.”

**“It is critical that children be allowed to be childlike. They need space in which they are not inhibited, so that they remain enthusiastic, creative, and curious. This learning is their foundation for life.”**

**Erum Mariam**, Executive Director, BRAC IED



### The Program: Play Lab

The Play Lab model is entirely local in its implementation. It begins with a survey of the community, with project staff canvassing the community, mapping the components of a living play lab. They create a list of children from ages 3 to 5, talking with families, locating a woman in the community who can be a leader, and working with the community to identify an appropriate space within walking distance of most homes. Potential Play Leaders are interviewed and engaged based on their ability to draw children into interaction, and receive a six-day training augmented with ongoing professional development. The chosen space undergoes a participatory transformation. A consulting architect makes plans that maximize the space inside and out, and the room is divided into zones: a story corner, a color corner, “world of imagination,” “my world,” and “outdoor world” where children engage in free play, a critical component of the curriculum. The Play Lab is fully realized with the delivery of handmade play objects: toys, instruments, and implements that reflect local routines, fashioned by parents out of local materials using indigenous craft techniques.

Children regularly spend two and a half hours at the Play Lab, where the Play Leader facilitates activities according to a set schedule and a shared curriculum, supported by rotating parent volunteers. However, the Play Leaders still have the liberty to be flexible according to the children’s preferences. The model follows a child-led approach with semi-structured play schedules. Parent engagement is key: there are monthly meetings for caregivers to promote the idea of engaging with children through play and fostering a stronger bond between parent and child. “One message is play, and how to engage children,” says Mariam, “but we are also talking about the importance of culture and how it provides a sense of belonging.” Each Play Lab has a management committee led by a Play Leader and including parents and community members. Parents continue to realize the space, gathering in workshops every three months to repair and reinvent the objects that populate the universe in which their children play. These gatherings, Mariam points out, are another moment that prioritizes cultural identity by encouraging the multigenerational manufacture of socially significant objects.

***Cultural identity is so linked with well-being. Play must reflect and celebrate culture to be of maximum benefit to children... So one message is play, and How to engage children, but we are also talking about the importance of culture and how it provides a sense of belonging.***

**Erum Mariam**, Executive Director, BRAC IED



### The Role of Music

Music and rhyme are central to a Play Lab space. Entering a Play Lab in Bangladesh, a young woman from the community might draw inspiration in the local sounds, along with traditional rhymes and melodies, to create and guide movement activities with the children. Impromptu songs might suffuse the space, inspired by the storytelling and folktales central to Bangladeshi culture. By contrast, Play Labs in Uganda and Tanzania have a different soundscape: they are filled with drums of different sizes, where even the youngest child can create improvised rhythms.

Other children, connected into a web by string, might dance in time to a beat or play shakers made from bottles filled with stones. These sonic traditions, woven into the everyday play of 3- to 5-year-olds, embody the values of a model where the curriculum reflects tradition and place, helping children develop what Mariam refers to as a sense of “belongingness” by taking in heritage through their senses of sound, sight, and touch.

*The curriculum reflects tradition and place, helping children develop what Mariam refers to as a “sense of belongingness” by taking in heritage through their senses of sound, sight, and touch.*

**Erum Mariam**, Executive Director, BRAC IED

### Scale and Outcome

Pioneered in 2015, Play Labs are now operating in 236 sites in Bangladesh and 80 locations across Tanzania and Uganda. Play Lab is three years into a project that demonstrates a model for integrating learning through play into the lives of vulnerable young children. The project hopes to reach more than 7,000 children in the target age group, to reach an equal number of parents with sessions promoting the idea of engaging children through play, and to expose close to 500 adolescent girls to para-professional training as Play Leaders.

Evaluation is built into the Play Lab project and represents a commitment to realizing the maximum potential of the model. “We focus on the research at the same time as the model so we can keep refining it.” The variegated nature of the evaluation constantly underway highlights the program’s values, emphasizing both the rigorous use of data collection and the qualitative experience of those who participate in the program on the ground. Play Lab has partnered with academic experts, including Dr. David Whitbread of Cambridge University and Dr. Cassie Landers of Columbia University, to develop a research plan and robust measures. Over a two-year period, the program has collected baseline and outcomes data, and will conduct one more outcomes measurement prior to analysis. Significantly, all scales in use have been validated for the local context.

Simultaneously, Play Lab is collecting qualitative documentation, seeking data from parents and from Play Leaders who contribute case studies that offer a narrative portrait of learning in the classroom.



### **BRAC Institute of Educational Development: Humanitarian Play Labs**

<b>Website</b>	<a href="https://www.braced.com/brac-play-lab/">https://www.braced.com/brac-play-lab/</a>
<b>Sites</b>	304 sites in refugee camps serving Rohingya families
<b>Participants</b>	<ul style="list-style-type: none"> <li>• 40,000+ Children, 0-6</li> <li>• Families</li> </ul>
<b>Since</b>	2017
<b>Evidence of Impact</b>	<p>Level 1: Proof of concept, developing measures for:</p> <ul style="list-style-type: none"> <li>• Playfulness</li> <li>• Knowledge, attitudes, and practices</li> <li>• Interactive social play</li> <li>• Mental health and resilience in refugee children</li> </ul>

#### **The Humanitarian Play Lab Model: Healing and Learning**

As the refugee crisis for Rohingya peoples escalated, Play Lab staff began to establish child-friendly spaces for children from ages 2 to 9, with even a few older children. “We realized that we could use the same framework, but that the same curriculum wasn’t culturally relevant. When the Play Lab staff asked kids to show them something that they really wanted to do, children would just start chanting rhymes. This happened over and over, so we began to look deeply into rhymes and chanting. . . One day, we saw a tent surrounded by community elders. The elders were silent, but listening—it was uplifting for them. Coming from the tent was the sound of the children chanting. We could see that this mattered, that the children chanting was lifting up the community. And we knew that this activity—chanting and rhymes—would be at the center of our work.” Digging deeply, the Play Lab team discovered a long tradition of rhymes or “kabbya” among the Rohingya: rhymes about chores, hygiene, the seasons, nature, fruits, the quality of goodness, and imaginary figures. The Rohingya children even greeted each other using kabbya. The children were also able to learn about their different body parts through different rhymes, as well as learning counting with them. These rhymes visibly crossed generations of the Rohingya community. The model also adapted physical play activities unique to the Rohingya children, as well as art, craft, and design from the community.

***One day, we saw a tent surrounded by community elders. The elders were silent, but listening—it was uplifting for them. Coming from the tent was the sound of the children chanting. We could see that this mattered, that the children chanting was lifting up the community. And we knew that this activity—chanting and rhymes—would be at the center of our work.***

**Erum Mariam**, Executive Director, BRAC IED



### Scale and Impact

More than 40,000 Rohingya children have played and learned at the 304 BRAC Humanitarian Play Labs since 2017. The Humanitarian Play Labs are also engaged in evaluation, though an emergency context dictates fewer measures in use. Program staff are looking into validating a playfulness measure across ages and stages, a play interaction tool, and a Knowledge, Attitudes and Practices (KAP) survey. The emergency context has escalated interest in finding measures for resilience to assess mental health among children who are refugees (Gifford, Bakopanos, Kaplan, & Correa-Velez, 2007; McCarthy & Marks, 2010).

### Best Practices for Inclusive Cultural Opportunities from Play Lab

Play Lab has much to teach the world about the importance of guaranteeing all children the time, safety, and support to play.

- **Engage the Community:** Play Lab staff co-construct with the communities it serves. Engagement structures every activity: the search for a site, staffing, and forming a committee of community members as co-designers. The point is to secure participation for longevity.
- **Invest in Curriculum:** Taking elements from traditional and cultural practices from its different communities, the Play Lab has a curriculum that focuses on learning and healing through play. Cultural preservation is achieved through kabbya, physical play, and art.
- **Invest in Spaces:** Play Lab spaces are often architect designed both in- and out-of-doors. Their layout is a deliberate reflection of what matters to children. Their contents are low-cost and local, but carefully crafted, cared for, and ever-changing.
- **Invest in Staff:** Individuals are selected through careful interviews and observations. They are paid a living wage. They receive monthly training and structured peer support. Their insights inform ongoing evaluation. Leaders come from that team. "It is extremely important to have a person from the community to create the environment. Investing in her is important because it is she who makes it all real."
- **Evaluation matters:** Since its inception, Play Lab has used the evaluation process to learn from program practitioners who are best informed by the realities of implementation, to leverage local and international partnerships and to build custom and carefully validated instruments, in order to improve.



# Future Directions: Music as a Human Intervention

*A mother and a young child are walking through a vegetable market under a very hot sun, on their way home. The child struggles to keep up and begins to cry. Her mother stoops, picks her up, balancing her bags. Leaning in, she says, “If we sing, it will go faster...It will take us only three or four songs to get there. Which one to start?”*

More than 200 million children under 5 years fail to reach their potential because of poverty, poor health and nutrition, and deficient care. The gap between their actual growth and what they would have achieved in a more nurturing environment is a measure of the loss in human potential for them as individuals, for their current and future families, and eventually for their communities and countries. Thus, the failure of children to fulfill their potential is a major driver in the transmission of poverty from one generation to the next (Grantham-McGregor, 2007).

Some of this loss is due to war and natural disasters, but much of it is remediable through low cost, flexible interventions such as sanitation, nutrition, immunization, affordable shelter, and basic education (Lake, 2011). However, those are not the only practices we need, particularly if our definition of human development includes curiosity, play, expression, along with the transmission of languages and culture. For those capabilities to flourish, we need equally frugal, adaptable, and scalable interventions – like music (Fancourt & Finn, 2019), as it is used by parents and children world-wide to confirm intimacy, build resilience, and point to possibilities.

As the earlier Literature Review suggests, there is a still-emerging, but increasingly compelling, body of evidence that music can fuel and support both young children and their families in:

- Developing a network of close relationships that can help to ensure that child-rearing is shared across partners and that the work of being a family is more equitably distributed,
- Ensuring that both children and adults develop the social-emotional skills that are at the heart of listening, mutuality, empathy, and collaboration,
- Laying the foundations for communication, in particular the use and preservation of first languages,
- Giving young children the habits of exploration and curiosity that can later lead to formal learning and school success, and



- Providing occasions and practices through which family members can help their children acquire and preserve a positive cultural identity, preserve and evolve their heritage, and grow a sense that they belong and will contribute to their communities.

In turn, the Landscape Review points out that, in at least four sectors of contemporary life, programs are already drawing on the powers of music to support young families through providing:

- Physical and mental health for all family members (as when older women write songs that carry life-saving information and welcome young mothers into a community of shared knowledge and respect),
- Safe and welcoming public spaces (as when places as ordinary as laundromats are furnished with books and music, allowing parents to sing and talk with their children, as well as wash their clothes),
- Engaged learning (as when parents join teachers in designing and building play environments where their children build instruments, sing, and perform), and
- Inclusive cultural opportunities (as when refugee mothers perform original lullabies in a national theater, accompanied by youth orchestra of young migrant players).

What would it look like if non-profits and governments, working across sectors, at the local, regional, and national levels, made concerted use of the low-cost, potentially high impact of music?



# Action Steps

## In Public Health

- **Make music a staple of childbirth and parenting classes**, using it as a prime example of a strength and a resource families everywhere can use to connect, soothe, and celebrate,
- **Call on music's active, lively qualities to engage all family members to join in infant and child care** (fathers, siblings, grandparents, godparents),
- **Recognize music as a non-invasive, affordable, ongoing strategy to address stress:** in post-partum isolation and depression, in programs to integrate migrant families, for young children made anxious by trauma and displacement, in programs that support children with disabilities,
- **Embed music as part of home visiting and community programs for families placed at risk**, using it as a generative, active setting in which to rebuild relationships and experience healing, positive emotions; where possible, build cross-disciplinary teams that draw on the insights of public health workers, music therapists, and collaborating musicians, and
- **Include music-based strategies as part of public health training for doctors, nurses, mid-wives, and volunteers**, to strengthen their communication, interpersonal, and clinical skills.

## In Community Planning and Design

- **Make indoor gathering spaces an integral part of the design of affordable housing** so that families have places to come together, sing, and dance in all weathers and circumstances, and
- **Guarantee safe, local green spaces** for large-scale movement, games, and music for families who otherwise live in small spaces, and for children and families with disabilities to be with others.

## In Early Childhood Education

- **Insist that music become an integral part of training for early childhood educators**, everyone should sing and play a simple instrument and learn how to use music to teach and to create a positive and playful learning climate,
- **Ensure that educators working with children with special needs and their families train to use music** as a way of supporting and engaging entire families in the development of a member with disabilities, and
- **Recognize culturally-diverse and responsive music-making as a strategy for making new children and families welcome** in childcare and school settings.

## In Arts and Culture

- **Insist that repertoire represents the many musical traditions in a community or region**, sharing the classics and masters of each,
- **Partner with colleges, universities, and conservatories to ensure that young musicians graduate knowing how to use their gifts beyond the concert hall**, including working for and with families and their young children,
- **Insist that public funding for theaters and concert halls require informal performance spaces and programs** that welcome families for free, and
- **Engage musicians and other performing artists to promote key public health messages** about nutrition, immunization, and health and well-being.

## Across all sectors:

- **Advocate with local and national governments to see the arts, including music, as cost-effective, culturally-responsive strategies for promoting the well-being of young families**, making them a prominent part of health, education, and planning,
- **Support continuing research on the impact of music programs**, particularly as they are implemented in challenging settings such as refugee camps, conflict zones, and in the path of natural disasters,
- **Build international consortia that pool implementation findings and outcomes** from programs on the ground, and
- **Use new digital opportunities to build audiences for music-making and for documenting the impact of music on young families.**





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## Appendix A: Search Terms Used

Musical Elements	Populations	Circumstances	Delivery Methods	Outcomes
singing	famil*	war*	intervention*	socio-emotional
humming	unit*	conflict*	program*	social emotional
clapping	parent*	international	low-cost	well-being
play*	caregiver*	global	best practice*	health*
songs	caretaker*	refugee*	mobile	life
songmaking	mother*	low-income	method of delivery	lives
whistl*	father*	at-risk	home visit	qualit*
movement*	maternal	disabilit*	tech*	language acquisition
game*	paternal	immigrant*	home-based	literacy
tradition*	communit*	minorit*	public health	positive
folk	household*	stress	public policy	enhance*
cultur*	home*	shelter*	policy	strength*
classical	cohesion	under-served	outcome*	agency
music*	attachment	under-resourced	develop*	early childhood development
lullab*	motherhood	trauma	improve*	early childhood education
listening	fatherhood	displaced	family support*	intra-personal
music therap*	infant*		innovat*	interpersonal
community music	baby		maternal health	pre-school
informal	babies		social policy	disadvantaged
ritual	child*		out-of-school	socio-economic
custom*	early childhood		education	living condition*
instrument*	prenatal		lesson*	early learning
rhythm*	toddler*		engagement	empathy
pattern*	young child*		learn*	behavior
improvis*			prevention	mental health
music making			mitigation	cognit*
kinesthetic*			evaluation	
			impact	
			effect*	
			result*	
			finding*	
			evidence	
			scale	
			scalability	
			to scale	
			implement*	
			study	



## Appendix B: Sample Programs with Differing Levels of Evidence

This review addressed the integrative question of how music making could support the development of young families. The aim was to gain an expansive picture of the available research evidence and programs making a difference on the ground and throughout the world. Therefore, our inquiry includes references to the results of a wide range of individual studies and some grey literature, such as evaluation reports. Thus, we included findings that resulted from quite different research methodologies in order to highlight both the depth and the breadth of current work in this field. The following table lists the major projects we highlight in the research and landscape reviews, grouped for area of impact and the currently available level of evidence.

Each program is coded by the level of evidence for impact currently available:

- +1** – Proof of concept for a program or intervention
- +2** – Successful implementation with clear outputs, but no external evaluation to date
- +3** – Descriptive/qualitative data, no comparison populations, suggestive of potential dimensions of impact
- +4** – Mixed methods, treatment and comparison sites
- +5** – Randomized control study(ies), multiple trials and locations

### PHYSICAL AND MENTAL HEALTH FOR ALL FAMILY MEMBERS

Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
HIPPY International (p. 48) <a href="http://hippy-international.org/">http://hippy-international.org/</a>	Argentina, Australia, Austria, Canada, Germany, Israel, Italy, New Zealand, South Africa, the United States, Denmark, Finland, Holland, & Turkey	Engages entire families in home visit programs (young children ages 3-5, siblings, parents, & grandparents)	1960; Founded by Dr. Avima D. Lombard	<p><b>(5) Randomized control design with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• Increased early cognitive development in children</li> <li>• Increased confidence in parents</li> </ul> <p>Barnett, T., Roost, F. D., &amp; McEachran, J. (2012). Evaluating the effectiveness of the Home Interaction Program for Parents and Youngsters (HIPPY). <i>Family Matters</i>, 91, 27-37. <a href="https://search.informit.com.au/ary;dn=030691059677131;res=IELAPA">https://search.informit.com.au/ary;dn=030691059677131;res=IELAPA</a></p> <p>Le Mare, L. &amp; Audet, K. (2003). The Vancouver Hippy project: Preliminary evaluation. In M. Westheimer, (Ed.), <i>Parents making a difference: International research on the home instruction for parents of preschool youngsters (HIPPY) program</i> (pp. 169-177). Jerusalem, Israel: Hebrew University Magnes Press.</p> <p>Hippy International (n.d.). HIPPY Research. Retrieved from <a href="http://hippyresearch.org/#results">http://hippyresearch.org/#results</a></p>

Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Health Research Council</b> (p. 51) <a href="http://nhrc.gov.np/">http://nhrc.gov.np/</a></p>	Nepal	Musical performance and education based intervention to tackle maternal mortality in 36 rural villages.	1991; Nepal's Ministry of Health, local Nepalese government authorities, schools, and health centers	<p><b>(5) Randomized control design with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Increased knowledge scores in intervention area.</li> <li>Greatest improvement experienced by the most illiterate members</li> <li>Participants continued to use songs after the intervention.</li> </ul> <p>Sharma, B. B., Loxton, D. J., Murray, H., Angeli, G. L., Oldmeadow, C., Chiu, S., &amp; Smith, R. (2018). A first step to improving maternal mortality in a low-literacy setting; the successful use of singing to improve knowledge regarding antenatal care. <i>American Journal of Obstetrics and Gynecology</i>, 219(6), 615.e1-615.e11. <a href="https://doi.org/10.1016/j.ajog.2018.09.038">https://doi.org/10.1016/j.ajog.2018.09.038</a></p>
<p><b>Parents Make the Difference</b> (p. 48) <a href="https://pdfs.semanticscholar.org/b04a/f4d97f62e90ed-52b120e80a187e4c0c3a030.pdf">https://pdfs.semanticscholar.org/b04a/f4d97f62e90ed-52b120e80a187e4c0c3a030.pdf</a></p>	Liberia	Parenting intervention program	2012; International Rescue Committee	<p><b>(5) Randomized control design with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Reduced violent physical and psychological punishment by parents/caregivers.</li> <li>Increased positive parent/caregiver and child interactions.</li> <li>Parents reported using singing in order to connect with their young children.</li> </ul> <p>Puffer, E. S., Green, E. P., Chase, R. M., Sim, A. L., Zayzay, J., Friis, E., &amp; Boone, L. (2015). Parents make the difference: a randomized-controlled trial of a parenting intervention in Liberia. <i>Global Mental Health</i>, 2, e15. <a href="https://doi.org/10.1017/gmh.2015.12">https://doi.org/10.1017/gmh.2015.12</a></p> <p>Sim, A., Puffer, E., Green, E., Chase, R., Zayzay, J., Garcia Rolland, E., &amp; Boone, L. (2014). <i>Parents make the difference: Findings from a randomized impact evaluation of a parenting program in rural Liberia</i>. International Rescue Committee <a href="https://www.rescue.org/sites/default/files/document/704/parentsmakedifferencereportfinal-18nov14.pdf">https://www.rescue.org/sites/default/files/document/704/parentsmakedifferencereportfinal-18nov14.pdf</a></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Reach Up and Learn (p. 49)</b>  <a href="https://www.reachupandlearn.com/">https://www.reachupandlearn.com/</a>, (based on the Jamaica Home Visit (JHV) intervention designed by Sally Grantham-McGregor</p>	Jamaica	Home visit program that includes music and movement activities	1970; XXX	<p><b>(4) Mixed methods with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• 20-year longitudinal data</li> <li>• Children performed better academically than their control-group peers</li> <li>• As adults, the children that participated in the program were less likely to participate in violent crime and earned more than their peers.</li> </ul> <p>Richter, L. M., Daelmans, B., Lombardi, J., Heymann, J., Boo, F. L., Behrman, J. R., Lu, C., Lucas, J. E., Perez-Escamilla, R., Dua, T., Bhutta, Z. A., Stenberg, K., Gertler, P., Darmstadt, G. L., &amp; Paper 3 Working Group and the Lancet Early Childhood Development Series Steering Committee (2017). Investing in the foundation of sustainable development: pathways to scale up for early childhood development. <i>The Lancet</i>, 389(10064), 103–118. <a href="https://doi.org/10.1016/S0140-6736(16)31698-1">https://doi.org/10.1016/S0140-6736(16)31698-1</a></p> <p>Gertler, P., Heckman, J., Pinto, R., Zanolini, A., Vermeersch, C., Walker, S., Chang, S. M., &amp; Grantham-McGregor, S. (2014). Labor market returns to an early childhood stimulation intervention in Jamaica. <i>Science</i>, 344(6187), 998-1001. <a href="https://doi.org/10.1126/science.1251178">https://doi.org/10.1126/science.1251178</a></p>
<p><b>Sing and Grow (p. 48)</b>  <a href="http://singandgrow.org/">http://singandgrow.org/</a></p>	Australia	<p>Community music therapy organization providing music programs (home visits, group classes) for parents/caregivers and young children</p> <p>The program also hosts workshops and community engagement events.</p>	2001; Australian Government Department of Social Services	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• Served over 10,000 families by 2015.</li> <li>• Served 2,000 families each year</li> <li>• Increased parents spending playful time with their young ones</li> <li>• Increased usage of musical activity in the home</li> <li>• Increased trust of health personnel.</li> </ul> <p>Docherty, L., Nicholson, J., &amp; Williams, K. (2007). Sing &amp; grow: The co-existence of evaluation research and clinical practice in an early intervention music therapy project. <i>New Zealand Journal of Music</i></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
				<p>Therapy, 5, 1-16. <a href="https://eprints.qut.edu.au/45612/">https://eprints.qut.edu.au/45612/</a></p> <p>Sing &amp; Grow (n.d.). Research &amp; Resources – Sing&amp;Grow. <a href="http://singandgrow.org/research-resources">http://singandgrow.org/research-resources</a></p>
<p><b>SMS4dads (p. 52)</b> <a href="https://www.sms4dads.com/">https://www.sms4dads.com/</a></p>	Australia	Mobile phone application that provides caregiving tips to new and expectant fathers	2016 University of Newcastle	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• 520 fathers in feasibility study</li> <li>• 92% of fathers in feasibility study reported that the app helped them in their transition to fatherhood</li> <li>• 83% reported it helped their relationship with the infant's mother</li> </ul> <p>Fletcher, R., Kay-Lambkin, F., May, C., Oldmeadow, C., Attia, J., &amp; Leigh, L. (2017). Supporting men through their transition to fatherhood with messages delivered to their smartphones: A feasibility study of SMS4dads. <i>BMC Public Health</i>, 17(1), 953. <a href="https://doi.org/10.1186/s12889-017-4978-0">https://doi.org/10.1186/s12889-017-4978-0</a></p> <p>Rodger, A. (2017). Working effectively with fathers during the peri-natal period. <i>Journal of Health Visiting</i>, 5(11), 540-541. <a href="https://doi.org/10.12968/johv.2017.5.11.540">https://doi.org/10.12968/johv.2017.5.11.540</a></p>
<p><b>Family Health Initiative (p. 48)</b> <a href="http://www.early-years.org/health/">http://www.early-years.org/health/</a></p>	Ireland	Parents/caregivers learn about balanced and healthy diets and physical activity for the whole family.	2011; Early Years Organization	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• Served 114 families in 3-year pilot study</li> <li>• Developed dance and movement-based activities allowing families to engage in physical exercise, but also innovate and enjoy the creative process in their homes.</li> </ul> <p>Hawkes, S., Boyd, D., &amp; Kelly, D. (2013). <i>Evaluating the impact of The Family Health Initiative</i>. Retrieved from <a href="http://www.early-years.org/health/docs/FHI.pdf">http://www.early-years.org/health/docs/FHI.pdf</a></p>





Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Bhanchin Aama (p. 50)</b> <a href="https://www.thecompassforsbc.org/sites/default/files/project_examples/BHANCHIN%20AAMA%20Radio%20brochure_Eng%26Nep.pdf">https://www.thecompassforsbc.org/sites/default/files/project_examples/BHANCHIN%20AAMA%20Radio%20brochure_Eng%26Nep.pdf</a>	Nepal	Radio drama and call in radio show targeting physical and mental health in women and children under 2 years old.	2011; Suaahara Nutrition Project & Ahlan Simsim	<b>(3) Descriptive/qualitative evidence with these outcomes:</b> <ul style="list-style-type: none"> <li>Served 41 districts in Nepal</li> <li>Used traditional stories and characters to deliver health messages</li> <li>Each episode generated an average of 1,5000 responses</li> <li>22% of women surveyed listened to the show and 82% of those women have taken action regarding feeding after listening.</li> </ul> <p>Safi, B. (2014). The Suaahara Nutrition Project: overview of scalable SBCC interventions. <a href="https://www.spring-nutrition.org/sites/default/files/events/sbcc4nutrition-suaahara_nutrition_project.pdf">https://www.spring-nutrition.org/sites/default/files/events/sbcc4nutrition-suaahara_nutrition_project.pdf</a></p>
<b>Parenting in Context - mDad (p. 52)</b> <a href="https://www.parentingincontext.org/completed-mdad-mobile-device-assisted-dad.html">https://www.parentingincontext.org/completed-mdad-mobile-device-assisted-dad.html</a>	Michigan, USA	Mobile phone application that provides education content to fathers to track their infants' physical and social development behaviors	2013; Action Research Lab at the University of Michigan's School of Social Work	<b>(3) Descriptive/qualitative evidence with these outcomes:</b> <ul style="list-style-type: none"> <li>Conducted usability testing of app with 31 fathers</li> <li>Participants perceived the app to be useful, engaging, and tailored to their status as fathers.</li> </ul> <p>Balu, R., Lee, S., &amp; Steimle, S. (2018). <i>Encouraging attendance and engagement in parenting programs: Developing a smartphone application with fathers, for fathers.</i> <a href="https://www.mdrc.org/sites/default/files/b3_dadtime_brief_508.pdf">https://www.mdrc.org/sites/default/files/b3_dadtime_brief_508.pdf</a></p> <p>Lee, S.J. &amp; Walsh, T.B. (2015). Using technology in social work practice: The mDad (Mobile Device Assisted Dad) case study. <i>Advances in Social Work, 16</i>, 107-124. <a href="https://doi.org/10.18060/18134">https://doi.org/10.18060/18134</a></p>
<b>The Lullaby Project (pp. 47, 53)</b> <a href="https://carnegiehall.org/education/social-impact/Lullaby-Project">https://carnegiehall.org/education/social-impact/Lullaby-Project</a>	New York, NY	Original songwriting program for families raising young children in stressful circumstances (e.g. homelessness, incarceration, teenage parenthood)	2011; Carnegie Hall	<b>(3) Descriptive/qualitative evidence with these outcomes:</b> <ul style="list-style-type: none"> <li>Served over 700 families</li> <li>Increased well-being and positive emotions</li> <li>Increased confidence in parenting</li> <li>Increased connections and interactions with social support network.</li> </ul>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Irene Taylor Trust – Lullaby Project</b> (case study p. 53) <a href="https://irenetaylortrust.com/">https://irenetaylortrust.com/</a></p>	<p>London, England</p>	<p>Refugee mothers – Praxis Community Projects &amp; Fathers who are incarcerated at Wandsworth Prison</p>	<p>2017; Irene Taylor Trust and The Royal Philharmonic Orchestra</p>	<p>Wolf, D. P. (2017). Lullaby: Being together, being well. Carnegie Hall. <a href="https://www.carnegiehall.org/Education/Social-Impact/-/media/51CF-25CE8162432BB51B257DD6714052.ashx">https://www.carnegiehall.org/Education/Social-Impact/-/media/51CF-25CE8162432BB51B257DD6714052.ashx</a></p> <p>Lullaby Project. (n.d.). Carnegie Hall. Retrieved May 6, 2019, from <a href="https://www.carnegiehall.org/en/Education/Social-Impact/Lullaby-Project">https://www.carnegiehall.org/en/Education/Social-Impact/Lullaby-Project</a></p> <p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• 9 Mothers and 8 Fathers participated</li> <li>• Increased well-being (connections, sense of meaning, positive emotions)</li> <li>• Increased proactivity (musical and social initiative)</li> <li>• Increased reflection (perspective and positive coping mechanisms).</li> </ul> <p>Ascenso, S. (2017). <i>The lullaby project: Areas of change and mechanisms of impact</i>. The Irene Taylor Trust. <a href="https://irenetaylortrust.files.wordpress.com/2018/06/the-lullaby-project_areas-of-change-and-mechanisms-of-impact_-_research-by-sara-ascenso.pdf">https://irenetaylortrust.files.wordpress.com/2018/06/the-lullaby-project_areas-of-change-and-mechanisms-of-impact_-_research-by-sara-ascenso.pdf</a></p>
<p><b>El Sistema, Greece – Lullaby Project</b> ( case study p. 55) <a href="https://www.elsistema.gr/">https://www.elsistema.gr/</a></p>	<p>Athens &amp; Thiva, Greece;</p>	<p>Refugee families and their allies, youth orchestra, incarcerated women</p>	<p>2016; Stavros Niarchos Foundation Cultural Center and El Sistema Greece</p>	<p><b>(2) Successful Implementation with these outputs:</b></p> <ul style="list-style-type: none"> <li>• Participants included 5 migrant women per year, 9 incarcerated women, and 200 youth orchestra members</li> <li>• National concert featuring lullabies by refugee mothers and mothers in prison drew audience of 1500, broadcast internationally</li> <li>• Attracted the collaboration of international composers (Israel, France, UK, USA, and Spain)</li> <li>• Participants report greater creativity and confidence for the mothers; increased fathers' respect and appreciation; and children's pride in their families.</li> </ul>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Suaahara – Good Food/ Nutrition (p. 51)</b></p> <p><a href="https://ccp.jhu.edu/projects/suaahara-nepal/">https://ccp.jhu.edu/projects/suaahara-nepal/</a> ; <a href="https://www.usaid.gov/nepal/factsheets/suaahara-project-good-nutrition">https://www.usaid.gov/nepal/factsheets/suaahara-project-good-nutrition</a></p>	Nepal	Call in radio show for women and children aimed to improve nutritional status	2011; Government of Nepal, the private sector, USAID	<p><b>(2) Successful Implementation with these outputs:</b></p> <ul style="list-style-type: none"> <li>Served over 20 districts in Nepal in a 5-year project</li> <li>Strengthened the training for health care volunteers</li> <li>Demonstrated the power of traditional media like radio to reach young families.</li> </ul> <p>Cunningham, K., Singh, A., Menon, P., Avula, R., Rana, P. P., Oylo, P., &amp; Alayon, S. (2016). Improving Nepal’s Female Community Health Volunteers (FCHV) Infant and Young Child Feeding (IYCF) Exposure and Knowledge: Results from Implementation Research on the Suaahara Program. <i>The FASEB Journal</i>, 30(1), 669-13. <a href="https://www.fasebj.org/doi/abs/10.1096/fasebj.30.1_supplement.669.13">https://www.fasebj.org/doi/abs/10.1096/fasebj.30.1_supplement.669.13</a></p> <p>Cunningham, K., Singh, A., Pandey Rana, P., Brye, L., Alayon, S., Lapping, K., Gautam, B., Underwood, C., &amp; Klemm, R. D. W. (2017). Suaahara in Nepal: An at-scale, multi-sectoral nutrition program influences knowledge and practices while enhancing equity. <i>Maternal &amp; Child Nutrition</i>, 13(4), e12415. <a href="https://doi.org/10.1111/mcn.12415">https://doi.org/10.1111/mcn.12415</a></p>
<p><b>Hands Up Mallee (p. 46)</b></p> <p><a href="https://www.handsupmallee.com/generations-music-together">https://www.handsupmallee.com/generations-music-together</a></p>	Mallee, Australia	Music learning program in Aged Care Facilities for residents and their families	2015; partnership with community, local service providers, & agencies	<p><b>(2) Successful Implementation with these outputs:</b></p> <ul style="list-style-type: none"> <li>Developed protocols for community conversations about First 1000 Days and child development (3 – 8)</li> <li>Developed resource materials for parents</li> </ul> <p><i>First Thousand Day Resources</i>. (n.d.). Hands Up Mallee. <a href="https://www.handsupmallee.com/first-1000-days-resources">https://www.handsupmallee.com/first-1000-days-resources</a></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Project Hera</b> (p. 51) <a href="https://project-hera.com/">https://project-hera.com/</a>	Turkey	Mobile phone application to provide health education to Syrian refugee mothers	2010; Canada Grand Challenges and run by Medical Search and Rescue Association (MEDAK)	<p><b>(2) Successful implementation with these outputs:</b></p> <ul style="list-style-type: none"> <li>• Program of maternal education about prenatal care, childcare, and immunization</li> <li>• Increase in numbers of infants and young children are appropriately vaccinated.</li> </ul> <p>Moritz, A. (2012). Supporting refugee women’s strategies for coping with challenges during maternity in resettlement: Shifting the focus from vulnerability to agency. <i>Revista Iberoamericana de Salud y Ciudadania</i>, 1(1), 119-156. <a href="https://s3.amazonaws.com/academia.edu.documents/33527228/RevistaIOHC_Vol1_N1_Final2.pdf">https://s3.amazonaws.com/academia.edu.documents/33527228/RevistaIOHC_Vol1_N1_Final2.pdf</a></p>
<b>MusicWorks</b> (pp. 49, 68, 70, 76) <a href="http://musicworks.org.za/">http://musicworks.org.za/</a>	Cape Flats, South Africa	Home visits to preschool children ages 2-6 and their families by early childhood teachers in training.	2002; NPO	<p><b>(2) Successful implementation with these outputs:</b></p> <ul style="list-style-type: none"> <li>• Served over 490 families</li> <li>• Increased access to music therapy, especially for children experiencing trauma</li> <li>• Developed higher levels of initiative, playfulness and creativity in children</li> <li>• Trained teachers to use music as a major tool for developing children’s capacities</li> <li>• Shared the use of music between school and home</li> </ul>
<b>Children’s Healthcare of Atlanta – Scottish Rite NICU – Little Lullabies Program</b> (p. 50) <a href="https://www.atlantamagazine.com/health/in-an-atlanta-nicu-babies-can-be-soothed-by-their-mothers-voices-whether-mom-is-there-or-not/">https://www.atlantamagazine.com/health/in-an-atlanta-nicu-babies-can-be-soothed-by-their-mothers-voices-whether-mom-is-there-or-not/</a>	Atlanta, Georgia, USA	Music Therapy Program for parents and newborn premature babies.	2018	<p><b>(1) Proof of concept:</b></p> <ul style="list-style-type: none"> <li>• Served 25 families in 2018</li> <li>• Parents recorded their voices while singing or humming and these recordings are played at the NICU for their babies</li> <li>• Songs used to facilitate parent-child interactions in the hospital</li> </ul>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Supporting Parents and Resilient Kids - SPARK (p. 49)</b> <a href="https://www.bmc.org/programs/spark-center">https://www.bmc.org/programs/spark-center</a>	Boston, MA, USA	Staff provide health care to families and young children in need in needed (at risk families, children with special needs).	1989; Boston Public Health Commission, with partners: Boston University School of Medicine, The Massachusetts Dept. of Early Education and Care, and additional state and federal funders	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Served 50-60 children annually</li> <li>Used music in small groups for social skill building.</li> </ul>
<b>Sesame TV/Ahlan Simsim (Pp. 50, 78)</b> <a href="https://www.macfound.org/grantees/10471/">https://www.macfound.org/grantees/10471/</a> ; <a href="https://www.sesameworkshop.org/what-we-do/shows/ahlan-simsim">https://www.sesameworkshop.org/what-we-do/shows/ahlan-simsim</a>	Syria, Iraq, Jordan, Lebanon	Arabic speaking cast who model respect, inclusion, and equality, aiming to build children's language, reading, math, and social-emotional skills	MacArthur Foundation	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Reached audience of 9.4 million children in Iraq, Jordan, Lebanon, and Syria.</li> </ul>

## SAFE & WELCOMING PUBLIC SPACES

Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Libraries without Borders - Wash and Learn (p. 64)</b> <a href="https://www.librarieswithoutborders.us/wash-learn-initiative">https://www.librarieswithoutborders.us/wash-learn-initiative</a>	USA	Created early-childhood activities for laundromats	2016; Libraries without Borders	<b>(4) Mixed methods, treatment and comparison sites with these outcomes:</b> <ul style="list-style-type: none"> <li>Increased access to literacy materials for young children</li> <li>Increased parent-child early literacy interactions</li> <li>Parents learning literacy strategies from visiting librarians</li> <li>Turned local laundromats into community centers.</li> </ul> <p>Laundry Literacy Coalition. (2019). Creating literacy-rich spaces in laundromats: Pilot evaluation findings. <a href="https://static1.squarespace.com/static/5bf406caa2772c50777ebf07/t/5d09267f0310f600010578c6/1560880778853/Libraries+Without+Borders+Impact.pdf">https://static1.squarespace.com/static/5bf406caa2772c50777ebf07/t/5d09267f0310f600010578c6/1560880778853/Libraries+Without+Borders+Impact.pdf</a></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Libraries without Borders – Ideas Box (pp. 62-65)</b></p> <p><a href="http://ideas-box.org">http://ideas-box.org</a>; <a href="https://www.librarieswithoutborders.org/2019/06/13/after-the-hurricane-maria-the-resilience-of-the-inhabitants-of-porto-rico/">https://www.librarieswithoutborders.org/2019/06/13/after-the-hurricane-maria-the-resilience-of-the-inhabitants-of-porto-rico/</a></p>	<p>Haiti, Columbia, Syria, Rwanda, Tanzania, Kenya, Senegal, Greece, Germany, France, USA, Australia</p>	<p>Mobile Pop-Up program to bring resources like books, technology and interactive programming to families in under-resourced and distressed communities</p>	<p>2007; Libraries without Borders</p>	<p>Creating literacy-rich spaces in laundromats pilot evaluation findings executive summary. (n.d.). Laundry Literacy Coalition. <a href="http://toosmall.org/blog/body/Laundry-Literacy-Coalition-Pilot-Evaluation_Executive-Summary.pdf">http://toosmall.org/blog/body/Laundry-Literacy-Coalition-Pilot-Evaluation_Executive-Summary.pdf</a></p> <p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>• 850,000 participants served</li> <li>• Established safe spaces</li> <li>• Built community ties</li> <li>• Increased academic learning and social skills in older children</li> </ul> <p>Peich, M.C. (2016). <i>Reinforcing the quality of education in emergency situations: Ideas Box increases academic performance by 23%</i>. <a href="http://www.ideas-box.org/images/etude_IDB_Burundi_en_15042016.pdf">http://www.ideas-box.org/images/etude_IDB_Burundi_en_15042016.pdf</a></p> <p>Lachal, C. (2015). <i>Ideas Box: An Innovating Psychosocial Tool for Emergency Situations–Impact Study in the Kavumu and Bwagirisa Camps, Burundi</i>. Washington, DC, Libraries Without Borders.</p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>ArkLink (p. 61)</b> <a href="https://ark.ie/content/files/Arklink.pdf">https://ark.ie/content/files/Arklink.pdf</a>	Dublin, Ireland	Arts center that serves children and adults	1999; The Ark	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Designed <i>Music With Your Children</i>, a program where a teaching artist guided parents/caregivers in how they could incorporate musical activity through dance, song, and storytelling between themselves and their young children</li> <li>Demonstrated increasing well-being, health, and social engagement throughout the neighborhood in an initial longitudinal study.</li> </ul> <p>Tweedle, A. and The Ark. (2007). <i>ArkLink Initiative in Fatima Mansions. Final report.</i> <a href="https://ark.ie/content/files/Arklink.pdf">https://ark.ie/content/files/Arklink.pdf</a>, May 5, 2019.</p>
<b>Ecosonic Playground Project (p. 39)</b> <a href="https://sites.uml.edu/ecosonic_project/">https://sites.uml.edu/ecosonic_project/</a>	Massachusetts, USA; Canada; Ireland	Community Program that works with children of all ages to design, build, and play large-scale, multi-player musical instrument structures made from reusable materials.	2016; UMASS Lowell	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>12 projects</li> <li>Short-term longitudinal studies suggest that participation in the project supports: problem-solving, creativity, language development, and peer relations.</li> </ul>
<b>Sugar Hill (pp. 59-60)</b> <a href="https://www.sugarhillmuseum.org/">https://www.sugarhillmuseum.org/</a>	New York City, NY, USA	Housing complex in New York City for formerly homeless individuals and families. Complex includes housing units, preschool education, and access to the arts via a community art gallery.	2014; Broadway Housing Community	<p><b>(1) Proof of concept:</b></p> <ul style="list-style-type: none"> <li>124 housing units</li> <li>Designed and built childhood education center that serves 200 children</li> <li>Launched performance series for families featuring the cultures and languages of the neighborhood</li> </ul>
<b>Toy Bus (p. 60)</b> <a href="https://www.crc-renfrewcounty.com/programs/toybus/">https://www.crc-renfrewcounty.com/programs/toybus/</a>	Canada	Mobile program that travels from neighborhood to neighborhood with play-based supplies and activities for families with children up to the age of 6 years.	1989; EarlyON child and family center and community action program	<p><b>(1) Proof of concept:</b></p> <ul style="list-style-type: none"> <li>Programs led by early childhood care professional including music, movement, and play, delivered by mobile vehicle</li> <li>Designed “Music and Movement” workshop to encourage 2- to 4-year-old children and their parents/caregivers to play games</li> </ul>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
				<p>involving physical movement, sing, play instruments, and even use rhythm as an agent to calm down</p> <ul style="list-style-type: none"> <li>Included resource library and workshops for parents and children.</li> </ul>

## ENGAGED LEARNING

Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Kaleidoscope (pp. 70-76)</b> <a href="https://settlementmusic.org/preschool/">https://settlementmusic.org/preschool/</a></p>	Philadelphia, PA USA	<p>Preschoolers (84 annually) &amp; Teachers.</p> <p>Preschools receive 12, 45-minute art classes (visual arts, dance, music) each week.</p>	1990; Settlement Music School NPO	<p><b>(5) Multiple Randomized Control Design with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Vocabulary gains</li> <li>Increased positive emotions</li> <li>Lower levels of stress</li> <li>Greater school readiness</li> </ul> <p>Brown, E. D., Garnett, M. L., Velazquez-Martin, B. M., &amp; Mellor, T. J. (2018). The art of Head Start: Intensive arts integration associated with advantage in school readiness for economically disadvantaged children. <i>Early Childhood Research Quarterly</i>, 45, 204-214. <a href="https://doi.org/10.1016/j.ecresq.2017.12.002">https://doi.org/10.1016/j.ecresq.2017.12.002</a></p> <p>Brown, E. D., Garnett, M. L., Anderson, K. E., &amp; Laurenceau, J. P. (2017). Can the arts get under the skin? Arts and cortisol for economically disadvantaged children. <i>Child Development</i>, 88(4), 1368-1381. <a href="https://doi.org/10.1111/cdev.12652">https://doi.org/10.1111/cdev.12652</a></p> <p>Brown, E. D., &amp; Sax, K. L. (2013). Arts enrichment and preschool emotions for low-income children at risk. <i>Early Childhood Research Quarterly</i>, 28(2), 337-346. <a href="https://doi.org/10.1016/j.ecresq.2012.08.002">https://doi.org/10.1016/j.ecresq.2012.08.002</a></p> <p>Brown, E. D., Benedett, B., &amp; Armistead, M. E. (2010). Arts enrichment and school readiness for children at risk. <i>Early Childhood Research Quarterly</i>, 25(1), 112-124. <a href="https://doi.org/10.1016/j.ecresq.2009.07.008">https://doi.org/10.1016/j.ecresq.2009.07.008</a></p>





Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<p><b>Promundo – Program P (p. 69)</b> <a href="https://men-care.org/what-we-do/programming/program-p/">https://men-care.org/what-we-do/programming/program-p/</a></p>	Nicaragua, Brazil, Indonesia, Rwanda, South Africa, Sri Lanka, Lebanon	Program encouraging fathers to be more active and involved in childcare.	2011; Promundo	<p><b>(5) Randomized control study with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Participants, compared to themselves at the start of the program, were almost half as likely to use violence against their female partners</li> <li>Participants were more likely to spend almost one hour more per day doing household chores.</li> </ul> <p>Doyle, K., Levto, R. G., Barker, G., Bastain, G. G., Bingenheimer, J.B., Kazimbaya, S., Nzabonimpa, A., Pulerwitz, J., Sharma, V., &amp; Shattuck, D. (2018). Gender-transformative Bandebereho couples' intervention to promote male engagement in reproductive and maternal health and violence prevention in Rwanda: Findings from a randomized controlled trial. <i>PLoS One</i>, 13(4), e0192756. <a href="https://doi.org/10.1371/journal.pone.0192756">https://doi.org/10.1371/journal.pone.0192756</a></p>
<p><b>Lively Minds (p. 69)</b> <a href="https://www.liveminds.org/our-programme">https://www.liveminds.org/our-programme</a></p>	Ghana, Uganda	Training program for young mothers (who often have not been able to access formal education) to operate low-cost "Play Schemes" for preschool children.	2008; founded by Alison Naftalin	<p><b>(3) Descriptive/qualitative evidence with these outcomes:</b></p> <ul style="list-style-type: none"> <li>Designed a train-the-trainers approach to ensure high quality implementation and continuity of the program</li> <li>Major gains in school readiness, children's health, and play at home.</li> </ul> <p>Amadu, S., Attanasio, O., Caeyers, B., Cattan, S., Caradona Sosa, L., Krutikova, S., Leighton, P., Masselus, L., &amp; Yakubu, M. (n.d.). <i>Pre-school and early childhood development in rural Northern Ghana: a snapshot</i>. Institute for Fiscal Studies. <a href="https://d639f295-30d8-45a4-968d-84b22728f1ed.filesusr.com/ugd/0528f7_93351f1635ae4ac08e4e53902e42e9bb.pdf">https://d639f295-30d8-45a4-968d-84b22728f1ed.filesusr.com/ugd/0528f7_93351f1635ae4ac08e4e53902e42e9bb.pdf</a></p> <p><i>Improving Early Childhood Development and Health with a Community-Run Program in Rural Ghana</i>. (n.d.). Institute for Fiscal Studies &amp; Innovations for Poverty Action. <a href="https://d639f295-30d8-45a4-968d-84b22728f1ed.filesusr.com/ugd/0528f7_8581e7ce48554e11befaf661031df7cc.pdf">https://d639f295-30d8-45a4-968d-84b22728f1ed.filesusr.com/ugd/0528f7_8581e7ce48554e11befaf661031df7cc.pdf</a></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Musiqati (p. 68)</b> <a href="https://www.unicef.org/jordan/press-releases/unicef-ambassador-zade-dirani-launches-worlds-first-music-therapy-programme-children">https://www.unicef.org/jordan/press-releases/unicef-ambassador-zade-dirani-launches-worlds-first-music-therapy-programme-children</a>	Syria	Music therapy program for refugee children	2016; UNICEF	<b>(2) Proof of concept:</b> <ul style="list-style-type: none"> <li>Pilot study with Makani Centers</li> <li>Early data indicates 65% of children displayed significant progress in participation, ability to wait and take turns, decision making, working with others, and express themselves confidently.</li> </ul>
<b>Happiness Project (p. 68)</b> <a href="https://vrolijkheid.nl/en/">https://vrolijkheid.nl/en/</a>	Netherlands, Syria, Bangladesh	Labs for asylum seekers across Netherlands.	2000; The National Foundation for the Promotion of Happiness	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Design for weekly workshops with young children composing and recording original music, making theater-plays, movies, and art.</li> <li>30 labs created.</li> </ul>
<b>OELA - Oficina Escola de Lutheria da Amazônia (p. 68)</b> <a href="http://www.oela.org.br/educacao">http://www.oela.org.br/educacao</a>	Amazon Region	Teaches young children how to make and use instruments out of forest materials.	1997; NPO	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Program designed to work with indigenous materials and music</li> <li>Trained 20 adolescents how to mentor in making instruments.</li> </ul>
<b>Growing with Music (p. 68)</b> <a href="https://www.unicefusa.org/stories/costa-rica-growing-music-program-helps-children-develop-life-skills/7218">https://www.unicefusa.org/stories/costa-rica-growing-music-program-helps-children-develop-life-skills/7218</a>	Costa Rica	Like-Skills program for young children that utilizes music and art as expressive and therapeutic tools	2011; UNICEF	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>First phases of the program reached 370 children.</li> </ul>
<b>HEART - Healing and Education Through the Arts (p. 68)</b> <a href="https://www.savethechildren.org/us/what-we-do/global-programs/protection/healing-and-education-through-the-arts">https://www.savethechildren.org/us/what-we-do/global-programs/protection/healing-and-education-through-the-arts</a>	Asia, Africa, Middle East, Eastern Europe, Latin America	Program for children ages 3 and up where teachers, therapists, and educators guide the children's process of discovery and rediscovery through the arts.	2011; Save the Children	<b>(2) Proof of concept:</b> <ul style="list-style-type: none"> <li>Served more than 350,000 children in the past 8 years</li> <li>Program designed to use both music and play-based tools</li> </ul>
<b>Cazuca Dreams On (p. 68)</b> <a href="https://www.globalgiving.org/projects/cazuca-dreams-on/">https://www.globalgiving.org/projects/cazuca-dreams-on/</a>	Cazuca, Columbia	Aims to tackle violence and marginalization of children.	2014; Fundacion Tiempo de Juego	<b>Proof of concept:</b> <ul style="list-style-type: none"> <li>Served 120 youth and children after one year of programming</li> </ul>
<b>Music Basti (p. 68)</b> <a href="https://enablingleadership.org/music-basti">https://enablingleadership.org/music-basti</a>	India	Music program for children	2008; Enabling Leadership	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Served almost 10,000 children</li> <li>Designed program with 48 lessons.</li> </ul>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>Musicians Without Borders</b> (p. 68) <a href="https://www.musicianswithoutborders.org/eng/why-music/">https://www.musicianswithoutborders.org/eng/why-music/</a>	Kosovo, Palestine, Greece, Northern Ireland, Germany, Rwanda, Uganda, El Salvador, Italy, Netherlands	Music program aiming to mitigate the damaging effects of catastrophe.	1999; founder and director Laura Hassler	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Created local music making programs guided by working principles of safety, inclusion, equality, creativity, and quality</li> <li>Helped children with their families negotiate trauma by utilizing a particular community's rich cultural resources in order to heal</li> <li>Worked in trauma zones globally.</li> </ul>
<b>Rise2Shine</b> (p. 69) <a href="http://rise2shine.org/programs/">http://rise2shine.org/programs/</a>	Port-au-Prince, Haiti	Childcare centers	2010; NPO	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Provided nutrition, health, and educational care to over 50 children</li> <li>Used songs as a way to celebrate and hold onto local history and traditions.</li> </ul>
<b>Fundacion Sirenaica</b> (p. 68) <a href="https://fundacionsirenaica.org/home/">https://fundacionsirenaica.org/home/</a>	Columbia	Arts program for children	2001; multiple sponsors	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Promoted the development of singing, music, and the arts in children and young people</li> <li>1,200 children have participated in arts programs.</li> </ul>

## INCLUSIVE CULTURAL OPPORTUNITIES / CULTURAL BELONGING

Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
<b>BRAC Institute of Educational Development: Play Lab</b> (pp. 68, 81-85) <a href="https://www.braced.com/brac-play-lab/">https://www.braced.com/brac-play-lab/</a>	Kenya, Bangladesh, Ghana, Rwanda, and Vietnam.	Teachers in training, Pre-School children (3-5) & families.  236 sites in Bangladesh  80 locations across Tanzania & Uganda	2015; BRAC Institute of Educational Development	<b>(2) Successful implementation with these outputs:</b> <ul style="list-style-type: none"> <li>Playfulness</li> <li>Interactive social play</li> <li>Mental health and resilience in refugee children</li> <li>Increased knowledge, attitudes, and supportive practices among staff.</li> </ul> <p><i>LEGO Foundation &amp; BRAC Play Lab Project. (n.d.). Clinton Foundation. Retrieved May 6, 2019, from <a href="https://www.clintonfoundation.org/clinton-global-initiative/commitments/lego-foundation-brac-play-lab-project">https://www.clintonfoundation.org/clinton-global-initiative/commitments/lego-foundation-brac-play-lab-project</a></i></p>



Program (page within landscape review) Website	Country	Participants & Program Description	Operating Since; Service Provider	Evidence of Impact (with links to evaluation studies where available)
				LEGO foundation commits \$24 million to 'learning through play' (2020, January 16). <i>Philanthropy News Digest</i> . <a href="https://philanthropynewsdigest.org/news/lego-foundation-commits-24-million-to-learning-through-play">https://philanthropynewsdigest.org/news/lego-foundation-commits-24-million-to-learning-through-play</a>
<b>MANSI (p. 77)</b> <a href="https://www.clintonfoundation.org/clinton-global-initiative/commitments/mansi-model-reduce-maternal-and-child-mortality">https://www.clintonfoundation.org/clinton-global-initiative/commitments/mansi-model-reduce-maternal-and-child-mortality</a>	India	Program works to improve newborn and maternal health outcomes in rural India.	2009; public-private partnership among the Government of Jharkhand and multiple organizations	<b>(2) Successful Implementation with these outcomes:</b> <ul style="list-style-type: none"> <li>Served over 11,000 infants and over 11,000 pregnant mothers</li> <li>Increased families' awareness about safe delivery and care of infants and their mothers.</li> </ul>
<b>Musical Rumpus (p. 78)</b> <a href="https://www.spitalfieldsmusic.org.uk/musical-rumpus/about-musical-rumpus/">https://www.spitalfieldsmusic.org.uk/musical-rumpus/about-musical-rumpus/</a>	Spitalfields Music, London, United Kingdom	Interactive operas designed for 0-2.5 year olds	2011; Spitalfields Music	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Reached over 14,200 babies, toddlers, and adults.</li> </ul>
<b>Touchbase Pears (p. 78)</b> <a href="https://www.touchbasepears.org.uk">https://www.touchbasepears.org.uk</a>	Birmingham, United Kingdom	Center for families of individuals with special needs.	2015; Sense	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Provides people with complex disabilities with spaces and programs of sensory arts practice.</li> </ul>
<b>MacPhail Center – Sing Play Learn (p. 78)</b> <a href="https://www.macphail.org/">https://www.macphail.org/</a>	Minneapolis, MN, USA	Internet broadcast of 'Sing, Play, Learn' curriculum to pre-school and elementary classrooms	1960s; MacPhail Center	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Developed internet broadcast of early music classes to guarantee that any participating school has access to highly trained instructors, teaching artists, and performances otherwise be beyond their reach.</li> </ul>
<b>Libraries Without Borders (pp. 62-65)</b> <a href="https://www.librarieswithoutborders.org/koombook/">https://www.librarieswithoutborders.org/koombook/</a>	Burundi, Central African Republic, Ecuador, France, Jordan, Nepal, USA	Mobile digital library & Wi-Fi hotspot for people whose access to creative activities has been disrupted by migration, civil strife, or natural disaster	2007; Libraries without Borders	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Digital library of thousands of learning resources that can be delivered to communities in need</li> <li>Design process includes content team in conjunction with the community served.</li> </ul>



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<b>Cool Culture (p. 77)</b> <a href="https://www.coolculture.org/cc/index.html">https://www.coolculture.org/cc/index.html</a>	New York City, NY USA	Partners with schools to provide free, unlimited access to 90 performance spaces, museums, historical societies, zoos, and botanical gardens.	2001;	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Partnerships with over 450 schools</li> <li>Provides free cultural access for more than 50,000 families</li> </ul>
<b>BabyOpera (p. 78)</b> <a href="http://www.babyopera.no">http://www.babyopera.no</a>	Norway; world-wide performances	Baby opera and music theatre for children 0-3 years old.	2008;	<b>(1) Proof of concept:</b> <ul style="list-style-type: none"> <li>Performed 850 shows since 2009</li> </ul>





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