



THE ARTS IN EARLY CHILDHOOD: SOCIAL AND EMOTIONAL BENEFITS OF ARTS PARTICIPATION

A LITERATURE REVIEW AND GAP-ANALYSIS (2000-2015)



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Melissa Menzer, PhD
Office of Research & Analysis
National Endowment for the Arts

In partnership with the NEA's Interagency Task Force on the Arts & Human Development

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Front Cover: The organization Creative Action works with students in Austin, Texas. Photo courtesy of Creative Action
Back Cover: An art class at Savoy Elementary School in Washington, DC. Photo by John Pinderhughes, courtesy of Crayola LLC and used with permission

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Every child is born with creative potential. It is our job in early learning programs—and later school years—to nurture that creativity and support resourceful problem-solving, imaginative thinking, and transference of skills and knowledge to new experiences. This new review adds to the growing evidence about how arts participation helps young children develop strong social and emotional skills. Yet we need to delve deeper into how and why the various art forms impact children’s learning. And then most importantly we need to get this information into the hands of teachers who need more assurance that increasing the use of the arts can benefit children’s learning in language and literacy, math and science, and most importantly in social-emotional development.

—Libby Doggett, PhD, Deputy Assistant Secretary
for Policy and Early Learning
Office of Elementary and Secondary Education
U.S. Department of Education

We are thrilled to see the NEA’s new report. We know that social-emotional development is at the foundation of learning across the life course, but especially for young children. Ample research has found that a strong social-emotional base in early childhood is associated with academic success and long-term outcomes like higher likelihood of employment, and lower likelihood of involvement with the criminal justice system. This report highlights that the arts are an important contribution to children’s social-emotional development. Art activities like singing, dancing, and visual arts are associated with an array of positive outcomes, including pro-social skills, cooperation, independence, emotional regulation, and reductions in both externalizing and internalizing behavior.

In the early years, children explore the world around them, experiment with new concepts, and learn new words and the meaning of words, through singing, dancing, drawing, and dramatic play. The arts can instill creativity, a love of learning, and motivation to go to school. It is critical that children in early childhood programs—whether Head Start, child care, or pre-kindergarten—receive the opportunity to learn through art. We look forward to continued research on social-emotional development to inform our work. We also need to have a better understanding of how the arts impact children’s approaches to learning, and cognitive and physical development.



—Linda Smith, Deputy Assistant Secretary and Inter-Departmental Liaison
for Early Childhood Development
Administration for Children & Families
U.S. Department of Health & Human Services



Military families enjoy a visit to the San Diego Museum of Art during the 2011 launch of the NEA's Blue Star Museums program.
Photo by Sandy Huffaker



Chairman's Note

Even as the National Endowment for the Arts (NEA) turns 50 this year, we look to another milestone on the horizon. Soon the NEA will hit the five-year mark for its Interagency Task Force on the Arts and Human Development, a partnership with several other federal agencies to catalyze research and knowledge-sharing about the arts' role in health and education across the lifespan.

In total, the Task Force members belong to 19 federal entities such as the Department of Health and Human Services (HHS), the Department of Education, the Institute of Museum & Library Services (IMLS), and the National Science Foundation. Quite early in their tenure, members decided it would prove enormously helpful—to federal grant-makers and to other public and private funders—if we all understood the state of

research on the arts and health for different age groups. What are some glaring needs in the field, and how might they be addressed through future programs and initiatives?

The hard work began with a study of the relationship between the arts and aging. The NEA and the National Institutes of Health (NIH) joined the National Academy of Sciences in sponsoring a workshop that exposed gaps and opportunities in today's research about the arts' relationship to older adults' health and well-being. Results from the workshop eventually prompted changes to an NIH grant announcement in one case and, in another, a brand-new funding opportunity for biomedical and behavioral researchers.

The focus then shifted to the other end of the age spectrum. What do we know about the potential benefits of arts participation for our youngest Americans (from birth to eight years old)? How strong is existing research on the subject, and which areas demand heightened investment?

Here we gained valuable insights from HHS' Administration for Children & Families, represented on our Task Force. Furthermore, key staff from IMLS and NIH's National Institute of Child Health & Human Development—as well as the NIH Library and the National Library of Education—all played a vital role in helping to set the parameters for what became a literature review and gap-analysis covering the last 15 years. The findings are before you now.

For the purpose of this review and gap-analysis, the NEA's Office of Research & Analysis (specifically, the lead researcher Melissa Menzer, PhD) made some tough choices. To conduct a proper literature review, the researchers had to narrow the categories of health and well-being being examined; while it was tempting to look at physiological or neurocognitive outcomes, for instance, researchers ultimately settled on **social and emotional benefits** of arts participation.

Likewise, our review focused on early childhood engagement in **music-based activities** (including **singing, playing musical instruments, or dancing**), **drama/theater**, and the **visual arts and crafts**. It did not explore storytelling or the literary arts, or arts participation specifically through electronic media. Despite these omissions, the report offers credible evidence that arts participation in early childhood is strongly linked to the following types of benefit:

Social skills development: helping, sharing, caring, empathy, and the capacity for other kinds of healthy interpersonal behavior

Emotion regulation ability: mood control and positive changes in affect and expression

Beyond showing plausible benefits for typically developing children, the research suggests **positive social-emotional outcomes for special populations** such as toddlers from families with low socioeconomic status, and children with autism or Asperger’s syndrome.

The report concludes with a sober assessment of gaps in the research literature, including methodological challenges that pertain to study length, research design, measurement standards, and generalizability of results. Still, the body of evidence is sufficient to justify targeted research into whether causal pathways exist between the arts and early childhood development. Inevitably, such research will need to account for the multi-modal nature of the arts and of creative activity as a whole.

As part of the NEA’s 50th anniversary, I recently announced a tripartite initiative called “Creativity Connects,” which will explore how the arts can connect with other sectors that want or utilize creativity. Just so, by connecting creativity with our peers across government, we strive to show, with this foundational report, how profoundly integral the arts are to human development at its earliest stages.

Jane Chu
Chairman
National Endowment for the Arts

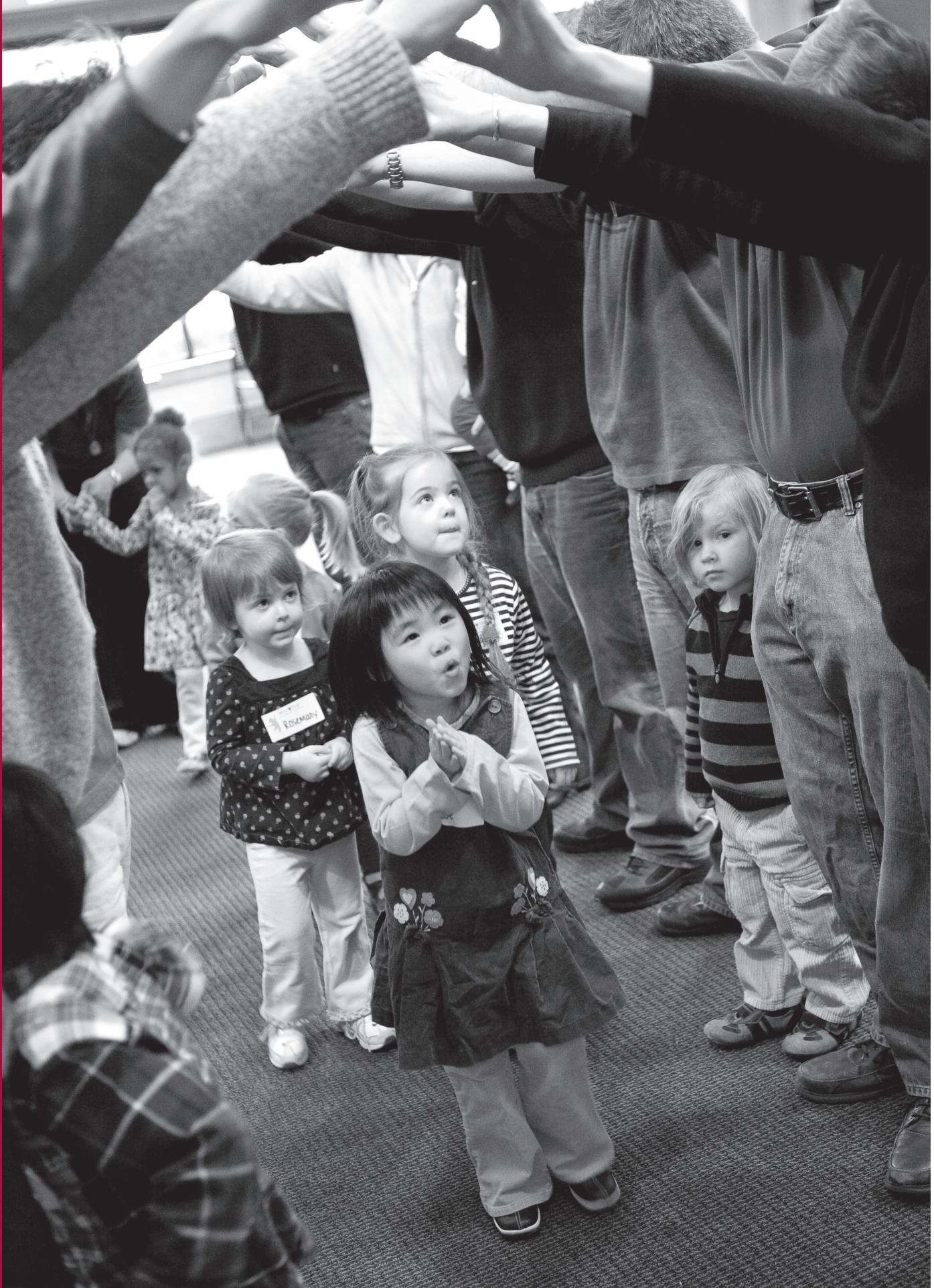
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Kids participating in a Wolf Trap Institute for Early Learning through the Arts session. Photo by Scott Suchman



Magna Diabaté, Aissatou Kouyate, Tapani Sissoko, and Mimah Doumbouya performing at the New York Griot Summit © 2011 by Magali Regis/Fula Flute Music

I. Why a Literature Review?

“This was no playhouse, but a house in earnest.”

—Robert Frost, “Directive”

Led by the National Endowment for the Arts (NEA), several United States federal agencies have come together with a mutual interest in identifying and filling knowledge gaps in how the arts affect individual health and well-being across the lifespan.

Dubbed the Interagency Task Force on the Arts and Human Development, this group includes 19 federal entities such as the Department of Health and Human Services (HHS), the Department of Education, the Institute of Museum & Library Services (IMLS), and the National Science Foundation (NSF). In parallel with this initiative, the NEA’s Office of Research & Analysis developed a system map and measurement model for “how art works.” The map and model offer a framework for exploring hypotheses about positive

links between arts participation and various developmental outcomes, such as social-emotional health, cognitive skills and motor functions, and overall quality of life. Over the decades, moreover, several sociocultural developmental theories have suggested that cultural artifacts and tools are important for optimal child development (e.g., Hinde, 1987; Vygotsky, 1978).

The early childhood period (generally defined as the years from birth to eight years old) is widely acknowledged as a critical period in which children develop and foster cognitive and social-emotional skills associated with success later in life. Guided by this assumption, the U.S. government has made key advances in providing opportunities for children to flourish. Examples include: Head Start and Early Head Start programs funded by HHS’ Administration for Children and Families, and, in more recent years, Preschool Development Grants funded by the Department of Education. There has also been, with reference to the arts

in particular, the Turnaround Arts program—an initiative of the President’s Committee on the Arts and the Humanities.

And yet, despite strong momentum for U.S. policies supporting early childhood development and education, little is known about how the arts specifically can contribute to children’s social and emotional skills. To be sure, a flurry of new research articles attest to positive social-emotional outcomes associated with arts participation in childhood. They include studies about the arts’ relationships to social activity (Cirelli, Einarson, & Trainor, 2014), and the ability to calm down (Shoemark & Arnup, 2014), and to self-regulate behaviors (Nicolopoulou, Barbosa de Sa, Illgax, & Brockmeyer, 2009; Winsler, Ducenne, & Koury, 2011).

Other research has pointed to socio-demographic characteristics that affect those relationships. Examples of such variables are age, gender, socioeconomic status, and atypical development such as autism. Indeed, the strength of any relationship between arts participation and social-emotional development will vary depending on combinations of contextual factors such as characteristics specific to the child, the household, and the broader environment (NEA, 2011).

So knowledge gaps remain. The goal of this literature review, then, was to synthesize contemporary research, published from 2000 through 2015, on the links between arts participation and early childhood social-emotional development. Arts-related empirical research focusing on the early childhood period is an emerging field, and one that inspired the NEA in 2004 to publish an evidence-based guide for parents about the value of arts participation early in life. Like that earlier report (*Imagine! Introducing Your Child to the Arts*), this one focuses on typically developing populations. The research herein is based on 18 empirical articles that were identified as relevant, that tested for statistically significant relationships between the arts and social-emotional development, and that meet the inclusion criteria for this

review. The articles came from various peer-review research journals in the fields of psychology and education. (More detail on the inclusion criteria for this review is given in the next section.)



A student and artwork at the Waverly School of the Arts in Brooklyn, New York.
Photo courtesy of Beverly Logan

II. How Were Studies Identified for Review?

Electronic searches for relevant empirical literature were conducted using journal databases such as Academic Search Premier, Education Research Complete, ERIC, MEDLINE, PsycINFO, Social Sciences Full Text, and SocINDEX with Full Text. Articles were considered for inclusion if they were published in peer-reviewed journals, and if they had all of the following characteristics: included at least one keyword in the arts (i.e., music, dance, drama, theater, drawing, painting)¹

and focused on social-emotional skills (e.g., pro-social behaviors, helping, sharing, caring, emotion regulation)²; focused on early childhood (age birth to eight years) of typically developing children or of children with Autism Spectrum Disorder; were published between January 2000 and June 2015; and included quantitative analyses.³

¹ This literature review focused on music, song, and dance; theater and drama; and visual arts and crafts. Notably, however, many other forms of arts participation are evident in early childhood, such as reading or being read to; listening to, telling, or writing stories; and engaging in the arts through electronic media (NEA, 2004). These art forms and modes of participation were omitted from our review for a couple of reasons. For example, there is already a strong knowledge base on the importance of reading and storytelling in children's lives. In addition, while toddlers do appear to use digital devices at surprising rates (see Kabali, Irigoyen, Nunez-Davis, Budacki, Mohanty, Leister, & Bonner, 2015), researchers are only beginning to examine impacts of this type of arts participation.

² The search strings used truncation (wildcards) to replace letters in words, which allow for a single search string for a word to retrieve results for all forms of that word. Search strings soc*, emo*, or psyc* were used for social-emotional skills. In addition, these search strings had to have appeared in the title, abstract, or keywords sections for an article to be included as relevant.

³ Our review thus excludes "gray literature" such as unpublished papers, dissertations, government reports, and other non-peer-reviewed articles.

Evidence was summarized for 1) the art form featured in the research study, 2) the social-emotional skills that were measured, and 3) the associations between the art form and social-emotional skills. Quantitative results deriving from significance testing were recorded for analyses that focused on the link between arts participation and social-emotional skills; the p-value cut-off point was 0.05. When available, measures adjusted for potential confounders were included. When evidence was insufficient to determine any link between the arts and social-emotional outcomes, the results were excluded.

Eighteen articles met the inclusion criteria for this literature review, eight of which focused on an arts education curriculum, and three on providing arts therapy.

Information gleaned from the studies included sample characteristics at the individual level, such as age, gender, and race and/or ethnicity of the child participants; and family or household socioeconomic status. Relevant information also included sample characteristics at the study level, such as the country in which the study was conducted, whether the applicable dataset was nationally representative or smaller in scale, the size of the sample, the rigor of the methodology, and whether or not the study included multiple time intervals for measurement (i.e., if children were assessed multiple times during the study). The arts were defined as including music/song/dance, drama or theater, and the visual arts. Some studies included multiple art forms while others focused primarily on one art form. Early childhood outcomes were coded based on social skills and emotion regulation. For more information about study characteristics, see p. 28.





Students proudly display their art work after an Action Arts and Science Program class at the Washington Pavilion of Arts and Science in Sioux Falls, South Dakota. Photo by Caleb Dirnberger

III. What Does Arts Participation Look Like in Early Childhood?

Arts participation in early childhood often includes such activities as music, song, and dance; drama and theater; and visual arts and crafts (NEA, 2004). As children become toddlers, they experience, to varying degrees, rapid development of communication skills, motor skills, and perspective-taking (or the ability to see from “someone else’s shoes”). Access to these abilities can permit participation in various kinds of arts activities. For example, **music-based activities** include relatively passive experiences such as listening to music or watching someone play an instrument, sing, or dance. This type of arts participation also takes the form of active experiences such as singing songs and rhythms, playing instruments or playing to a beat, and **dancing**, bouncing, or moving to rhythmic sounds.

In addition to music-based activities, children can engage in **drama or theater**. Drama, theater, and story-acting allows children to

create fictional spaces where they can role-play and practice communication, social, and emotion regulation skills (Nicolopoulou et al., 2009). This ability to suspend disbelief and engage in fictional spaces and roles becomes more sophisticated and complex as children enter into toddlerhood and preschool age.⁴

Children can also participate in **visual arts and crafts**, such as playing with building blocks; drawing, painting or finger-painting; and sculpting clay or playing with sand (NEA, 2004). Participation in visual-based arts activities is largely non-verbal but does require gross and fine motor skills that enable children to

⁴ Theater and drama activities included in this review focus on formally structured and educational settings for theater and drama, such as at school or at the theater, and not on informal (“pretend”) play, which has a different theoretical underpinning than do structured drama experiences (Rubin, Fein, & Vandenberg, 1983).

construct tactile and tangible creative objects. Consider that scribbling (which uses generally gross motor skills) is a precursor to writing and drawing distinct and recognizable objects and letters (which uses fine motor skills). Also consider that in the early ages of life, participation in visual arts and crafts may occur only to the extent of exploring and playing, rather than creating finished works of art (NEA, 2004).

Because far more research has focused on children's music participation (and by natural extension, dance), compared with their participation in theater and visual arts activities, most of the literature in this review is about music and dance. Still, the review does cover theater and the visual arts to the extent that such research is available.



The 2011 Make Music New York festival. Photo by Liz Ferguson

IV. How Is Arts Participation Linked to Social-Emotional Development?

Through the NEA Interagency Task Force on the Arts and Human Development, many federal government entities, researchers, and program officers have explored connections between the arts and positive individual outcomes across a person's lifespan. A growing body of evidence suggests that at virtually every stage of life, the arts can foster openness to novelty, encourage connections to people, places, things, and concepts, and promote the ability to take multiple perspectives, among other positive outcomes (NEA, 2011).

Children experience rapid and important transformations from birth to eight years old in three broadly defined domains: social-emotional, physiological, and cognitive. The current review focuses on literature published in the past 15 years (2000-2015) relative to the arts and social-emotional outcomes—specifically, to arts participation and the development of social skills and emotion

regulation during the early childhood period.

Other domains are also likely to be affected by arts participation, such as literacy (Anvari, Trainor, Woodside, & Levy, 2002), math and science skills (Brown, Benedett, & Armistead, 2010), general communication strategies (Muallem & Klein, 2013), and physical health (NEA, 2004). Dance, for example, allows children to explore and express their feelings and emotions (Zentner & Eerola, 2010), but it also can promote flexibility and improve circulation as well as foster learning in spatial concepts (NEA, 2004).

Further, children typically engage in a variety of learning experiences, often directed, scaffolded, or socialized by caregivers and teachers. ("Scaffolding" refers to a process whereby an adult initially provides support for learning but then gradually withdraws support until the child is able to use a skill on his or her own.) These

differential contexts, particularly in activities that have a strong social component, can contribute to the impact of arts engagement on children's early social-emotional development, and to children's greater understanding of the world around them (Hinde, 1987; Rose-Krasnor & Denham, 2009; Vygotsky, 1978).

Social Skills and the Arts

One part of social-emotional development involves social skills, which refer to pro-social behaviors such as helping, sharing, caring, and empathizing with others (Eisenberg, Fabes, & Spinrad, 2006). This domain also involves the development of other positive social bonds (Dunn & Hughes, 2001).

- Several studies have shown positive associations between engagement in music-based activities and social skills for typically developing children.
 - In a nationally representative study sample, **parents** who reported **singing** to their child at least three times per week had a **higher likelihood of also reporting that their child had strong and sophisticated social skills**, such as pro-social behaviors, compared with parents who reported singing to their child less than three times per week (Muniz et al., 2014).⁵
 - **Toddlers** participating in a **four-to-eight month, classroom-based music education program** to promote school readiness were **more likely to increase their level of teacher-reported social cooperation, interaction, and independence** over the school year, compared with a control group who did not receive a music education program (Ritblatt, Longstreth, Hokoda, Cannon, & Weston, 2013).
- **Children** assigned to a **dance group** that met twice a week at school for eight weeks had **stronger improvements from pre- to post-assessment in parent- and teacher-reported social skills**, such as pro-social behaviors and cooperation. These children also showed strong reductions in internalizing (shy, anxious behavior) and externalizing (aggressive behavior) problems. Such effects were significantly stronger when compared with those for a control group (Lobo & Winsler, 2006).
- **Mothers** who engaged with their infants in a **five-week music and movement program** were **more likely to increase their reported quality of attachment with their child over time**, compared with mothers in control groups who either did not get an intervention or who participated in social play that did not include music (Vlismas, Malloch, & Burnham, 2013).
- Some studies have also shown that **participation in a one-year formal drama-based education program is positively related to some social skills development** in youth (Nicolopoulou et al., 2009; Schellenberg, 2004). However, little research in general has focused on formal drama-based programs.
- For studies involving visual arts, **parents who reported using toys for building things**, like blocks, with their child “a few times a week” or more had a **higher likelihood of also reporting that their child had strong and sophisticated social skills**, compared with parents who reported playing with blocks with their child less frequently (Muniz et al., 2014).
- In one case, children who played with their parents at least “a few times a week” in more than one family routine (such as singing **and** playing with toys for building things) had **more sophisticated social-emotional skills than children** who did those activities less frequently (Muniz et al., 2014).

⁵ This study did not distinguish between social skills and emotion regulation. This study used data from the Early Childhood Longitudinal Study-Birth Cohort preschool wave, which is a nationally representative dataset of children born in 2001; the analyses in this study included approximately 9,000 children.

- Many of the arts-based studies that focused on the outcome of social skills also included a social component to the arts activity (e.g., children doing arts-based activities with their parents, with other children, and/or with teachers or experimenters).
- In **some** cases there were **null relations** between arts participation and social skills.
 - For example, six-year-old children who took music lessons in voice or keyboard saw little to no improvements in social skills over one year (Schellenberg, 2004).
 - Children who participated in a drama-based education program saw decreases particularly in disruptive behavior and they experienced improvements in self-regulatory behaviors, compared with children who did not participate in the drama-based education program. However, there were no significant changes in pro-social behavior over the school year (Nicolopoulou et al., 2009).
 - As previously mentioned, children who participated in a music-based education program were reported by teachers to improve in their social skills over the school year; however, parents did not report similar improvements (Ritblatt et al., 2013).

Despite some gaps in the research, and a few non-significant findings, there is a general trend in the literature that engagement in the arts during early childhood has benefits for children’s social development.

Emotion Regulation and the Arts

Emotion regulation, or the ability to control emotional affect and expression, is another aspect of social-emotional competence. As children age, they become better able to regulate and control their own emotions (Elias & Berk, 2002). This ability is in turn associated with improved functioning as well as adjustment over time (Brown & Sax, 2013).

As with the research on social skills development, several studies have emerged that focus on the relationship between arts participation and emotion regulation. In general, the research has yielded positive findings.

- Compared with a matched-control group, **toddlers** in an arts integration program comprised of **daily music, creative movement (dance), and visual arts** displayed **improvements in teacher-rated positive and negative emotion regulation** over the course of the school year (Brown & Sax, 2013).
- Engagement in music and dance was positively associated with emotion regulation:
 - **Infants** who participated in a six-month **active music group** had **better outcomes for emotion regulation behaviors** than did infants in a six-month passive music group. “Active” referred to focused attention and participation in singing and dancing and “passive” referred to music playing in the background while infants engaged in doing something else entirely (Gerry et al., 2012). Notably, within this entire literature review, it was the only study that focused on active versus passive participation in the arts.
 - **Music-based activities** were associated with **greater use of expressive emotions** by children—regardless of the tone of the music—than was free play (Muallem & Klein, 2013). This effect was similar for the mothers’ use of expressive emotions. (In the study, mothers and children were observed engaging in ten minutes of a music activity followed by ten minutes of a free-play activity.)
- Participation in visual arts activities was also associated with positive emotional development.

- When **children aged six-to-eight and ten-to-12** who were included in the same study were instructed to engage in **drawing a house** to distract them after being asked to think of a past event that made them feel upset or disappointed, they were better able to **improve their mood**—compared with other children who were instructed to draw the negative event, or children who were instructed to copy another drawing (Drake & Winner, 2013).⁶
- Many of the arts-based studies that assessed for emotion regulation also included a social component to the arts activity.
- **In a single case**, arts participation was found to be unrelated to emotion expression. While toddlers in an arts program expressed more positive emotion in their arts classes than their regular non-arts classes, they also expressed similar levels of negative emotions across all classes; furthermore, this rate of negative emotion expression did not differ when comparing toddlers from the arts program with those who did not participate in the arts program at all (Brown & Sax, 2013).

The literature thus synthesized and discussed provides **strong evidence that arts participation during early childhood has benefits for social-emotional development**, such as social skills and emotion regulation, at least in terms of immediate and short-term effects. Contemporary literature reviewed in this paper suggests that, overall, music, drama, and visual arts activities are positively related to both social and emotional competencies in early childhood. As shown above, there were some exceptions, which may be attributable to a variety of factors such as sample size and demographic characteristics, as well as other methodological variations. A more thorough overview of these factors is presented below.

⁶ The original study included both age groups in the same analysis, but statistically controlled for age. Including age in the analysis did not significantly change the relationship between art form and emotion-regulation indices.



Invin Mayfield (right) with Evan Christopher, Leon Brown, and his son Little Leon Brown performing at Lafayette Square in New Orleans. Photo by Flickr user Robbiesaurus

V. What Roles Do Individual-Level Characteristics Play in the Relationship between Art and Social-Emotional Development?

As the research literature discussed in the previous section generally suggests, the arts are beneficial for, or at least positively associated with, social-emotional development. Still, a variety of individual and demographic characteristics also can play an important role in this link. Key variables discussed below are age, gender, socioeconomic status, and developmental disability status.

Age and Gender

Given that children go through remarkable transformations throughout the early childhood period, it seems necessary to discuss different age periods within early childhood, such as infancy and toddlerhood. Infants' skills are quite different and more simplistic than those of toddlers. For example, infants

ordinarily do not participate in drawing, given that they do not have the appropriate gross and fine motor skills, or even the strength, to do this activity. There is, consequently, a relative lack of research about children younger than two years old who participate actively in the visual arts.

- The age range featured in each study that met the criteria for this review was generally too homogeneous to bear an examination of age-related differences. In some studies, however, there were age-related differences (though not apparently linked to arts participation) in social-emotional skills during early childhood; as would be expected, older children generally had better social-emotional skills than did younger children (e.g., Muniz et al., 2014).

- Of the studies reviewed in this paper that did include infants (e.g., Cirelli et al., 2014; Zenter & Eerola, 2010), all focused on music and to some extent dance. Very little work has focused on formal drama activities or visual arts among infants and toddlers; among these studies, age comparisons could not be conducted.
- Gender has been shown to be an important characteristic in child development research (Kennedy Root & Denham, 2010). Yet **many of the studies in this review did not find gender differences in the link between the arts and social-emotional outcomes** (e.g., Lobo & Winsler, 2006).
- While not the focus of this literature review, it may be important for future research to examine longer-term social-emotional outcomes of early childhood arts participation, as well as arts participation during later childhood, adolescence, and adulthood, in addition to gender differences across these different age periods.

Family Income and Socioeconomic Status

Family income and socioeconomic status (SES) may also be an important characteristic to consider in the relationship between early childhood arts participation and social-emotional outcomes. (SES typically comprises information about parent income, parent education level, and/or parent occupation; see American Psychological Association Task Force on Socioeconomic Status, 2007.) A family's low SES level can be a significant barrier to arts participation as well as a risk factor for delayed or maladaptive social-emotional development. In the evidence reviewed, the arts were linked with positive impacts for children from low-SES families.

- **Engagement in a dance program was related to improvements in social competence, such as pro-social behaviors and cooperation, and to stronger reductions in internalizing and externalizing problems over time,**

compared with a similar group of children in low-SES families who did not engage in a dance program; children in this study were randomly assigned to either the dance program or a control group (Lobo & Winsler, 2006).

- Compared with a matched-control, low-SES group, low-SES **toddlers in schools that included an arts integration program had more positive emotion expression, and also displayed improvements in teacher-rated positive and negative emotion regulation** over the course of the school year (Brown & Sax, 2013).
- In a nationally representative study sample, SES was positively related to parents' reports of **singing to their child**, but SES was not related to their reports of **using toys for building things** with their child (Muniz et al., 2014).
- In two studies focusing on music participation in infants, infants from families varying in SES did not yield differential outcomes for emotion regulation (Gerry et al., 2012; Mualem & Klein, 2013).

Atypical Social-Emotional Development

Beyond age, gender, and socioeconomic status, other factors can affect the relationship between arts participation and social-emotional development. One such factor is atypical social-emotional development in childhood—for instance, autism spectrum disorder (ASD), a neurological developmental disorder that significantly impairs social skills, language, and communications, depending on where a child is on the spectrum.

Generally, autism is diagnosed by age three (Reschke-Hernandez, 2011). This disorder may be the most revealing in terms of the influence that the arts have on early childhood social-emotional development, given the challenges that autistic children face in their social-emotional experiences and interactions. Many scholars have used qualitative methods to

assess the relation between music and social-emotional development for children with autism. These researchers have concluded that music therapy is a useful tool in caring for children with autism (for a review, see Reschke-Hernandez, 2011). Scant research has focused, however, on other art forms for these children.

Among studies involving rigorous and quantitative design, there is some indication that

- **Music therapy has benefits for social-emotional development in children with autism** (Dezfoolian, Zarei, Ashayeri, & Looyeh, 2013; Thompson et al., 2014); and
- **Compared with “play” sessions, music sessions yield stronger and more positive outcomes** (such as making and maintaining eye contact) for autistic children between three and five years old, when mothers and professional clinicians rate the children on behavior and social communications. The children in one study were assigned to participate in 12 weeks of music lessons and 12 weeks of play sessions; these sessions were randomly counterbalanced so that the first 12 weeks was for one activity and the second 12 weeks was for another activity (Kim, Wigram, & Gold, 2008).

Contemporary literature reviewed in this paper suggests that, overall, arts activities are positively related to early childhood social-emotional competences. In some select cases, individual differences such as age, gender, and socioeconomic status may play an important role in this link. However, significant gaps still remain in our understanding of the relationship between arts participation and social or emotional outcomes for infants and toddlers.



A child enjoys the outdoor exhibit iLounge Instant/Interim/Interactive by Marcella Del Signore and Mona El Khafif in the SoFA district of San Jose, California, as part of the 2012 ZERO1 Biennial. Photo by Patrick Lydon



Parents and children from the First Steps Little School create wooden architecture sculptures as part of the Katonah Museum of Art's Arte Juntos/Art Together program. Photo courtesy of the Katonah Museum of Art

VI. Methodological Challenges: What Remains to Be Done?

Several factors pertaining to study design should be considered when evaluating the status of research on the arts and social-emotional development in early childhood. The importance of these factors is by no means restricted to studies of this particular age cohort or even to studies of this topic. For example, an earlier report produced by the NEA in collaboration with the National Institutes of Health identified similar concerns as paramount for future research on the arts and health and well-being among older adults (NEA, 2013).

Pursue Experimental Research Designs

- Strong evidence suggests that considerable positive effects have been found for the link between arts participation and early social-emotional development in quasi-experimental and experimental studies.

The studies that do use experimental designs suggest that levels of arts participation can predict unique sets of social-emotional skills such as pro-social behaviors (e.g., Kirschner & Tomasello, 2010), 2009), general social skills (e.g., Lobo & Winsler, 2006; Ritblatt et al., 2013), and better emotion-regulation skills (e.g., Gerry et al., 2012).

- **Most of the studies reviewed focused exclusively on arts activities that are social** (doing arts activities with parents, other children, and/or teachers) and thus did not isolate arts participation in social contexts from such activities done in solitude. Future studies should aim to explore this distinction, preferably using experimental or quasi-experimental designs.

Resolve Measurement Discrepancies

- There is complexity and a **heterogeneity of skills within social-emotional development**, such as distinctions between positive and negative emotion regulation (Brown & Sax, 2013); among sharing, helping, and cooperative problem-solving behaviors (Kirschner & Ilari, 2009; Kirschner & Tomasello, 2010); and between general social and emotional skills (Muniz et al., 2014). More research needs to examine this heterogeneity, and the many qualities of social-emotional development.
- **The arts themselves are heterogeneous.** For example, music/dance/singing are quite different art forms than drama and theater or visual arts and the outcomes associated with these different art forms may vary as well. For example, one study that included a music education group, a drama education group, and a no-art group found that children in the drama education group saw considerable improvements in social skills whereas children assigned to a music education group saw little to no improvements in social skills (Schellenberg, 2004).
- Issues related to **validity, reliability, and discrepancies of the measurement tools** continue to bedevil research on the arts and early social-emotional development. For example, there have been discrepancies in measurement by parents, research observers, and teachers (Ritblatt et al., 2013), perhaps due to different expectations of children's behaviors. Alternatively, researchers may use unstandardized measurement tools or methods (Muniz et al., 2014).

Include More Diverse Groups, Achieve Generalizability

- Most of the studies reviewed here **did not have enough statistical power** to examine differences in individual or demographic characteristics. In particular, there is a need for larger studies that have the appropriate power to detect differences between

individual characteristics such as **age, gender, and ethnicity, race, or culture**, the latter three of which were not discussed in this NEA report but could be important to consider (Rubin & Menzer, 2010).

- There may also be **variability for unique populations** beyond basic demographics.
 - While the current literature review focused primarily on normative development and also autism (Thurm & Swedo, 2012), it would behoove researchers to review the literature on other **disabilities, such as physical impairments or traumatic brain injury** (Yeates et al., 2007), where certain affective-related areas in the brain are impacted.
 - Relatively little is known about the use of arts interventions for children who are **socially or psychologically maladjusted**, such as children who are anxious and withdrawn, and/or aggressive (Coplan, Ooi, Rose-Krasnor, & Nocita, 2014).
- It is necessary to examine through the research literature whether arts participation can help children of **varying psychological, social, cognitive, and biological profiles** to optimally develop or at least to make small improvements in social-emotional competences.



VSA Texas leads students in a drum circle. Photo courtesy of VSA Texas

VII. Conclusion: Toward a Next-Generation Research Agenda

This review provides compelling support for a positive relationship between arts participation and the development of social and emotional skills in early childhood. Overall, considerable positive effects have been found for this link; important to note, however, is that the report depicts the current state of the field *only within the parameters set by the review*.

To take two prominent examples, the literature search did not attempt to find research articles about **children who read literary works or who had stories or poems read or told to them**; nor did the search tag articles about **children’s arts participation via electronic media**. In addition, much of the relevant research over the past 15 years has focused solely on music and on no other art forms. Further, the present report does not cover cognitive and physiological benefits, which ideally will form the basis of a subsequent literature review. Beyond those caveats—and the methodological challenges noted earlier—there

remain critical gaps, which in turn suggest a need for new research priorities concerning the social-emotional benefits of arts participation in early childhood.

At least four priority research questions flow logically from this literature review and gap-analysis:

- 1) **How do the arts relate to positive social-emotional outcomes over time and across the lifespan? Does arts participation in early childhood have a causal relationship to these outcomes?**
- 2) **To what extent is the link between arts participation and social-emotional skills development affected by a host of socio-demographic variables—particularly among children at risk, such as those in low-income and/or high-crime neighborhoods?**

- 3) **How do the arts relate to outcomes for children with developmental disabilities, such as autism, Asperger’s syndrome, Down’s syndrome, or for children with physical disabilities?**
- 4) **How do the arts relate to distinct or similar social-emotional outcomes depending on the art form (e.g., music-based activities or dance or drama/theater or visual arts/crafts), mode of participation (e.g., “active” or “passive”), or the social context of the participation (e.g., with others versus alone)?**

The celebrated Argentine author Jorge Luis Borges once wrote: “Nothing is built on stone; all is built on sand, but we must build as if the sand were stone.” This saying captures the total absorption of children engaged in any form of creative play—or art—but it also evokes the uncertainty of much of what we currently know about arts participation in early childhood. Despite significant knowledge gaps, this document might fit as a cornerstone in a growing structure of evidence for the parents, educators, cultural providers, and policy-makers who serve our nation’s youngest and most vulnerable populations.



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Characteristics of Studies Reviewed

	<i>Studies (n)</i>
Total studies	18
Music (and Dance) studies	16
Drama/Theater studies	2
Visual Arts studies	2
By Outcome	
Social Skills	15
Emotion Regulation	4
By Study Methods	
Between Subjects Experiment	9
Within Subjects Experiment	3
Quasi-experimental with Control Group	4
Quasi-experimental without Control Group	1
Pre-Post with One Group	1
By Arts Program Type	
Arts Education Program (any art form)	8
Music Therapy	3
Other (any art form)	7
By Sample sizes	
> 9000	1
101-400	5
20-100	12
By Age	
Infants (< 2 years old)	7
Toddlers/Children (2-8 years old)	13
By Socioeconomic Status	
Low SES	3
Middle SES	3
High SES	1
Diverse	4
Unknown	7
By Developmental Disabilities	
Normative/Typical	15
Autism Spectrum Disorder	3

Note. Some studies include multiple art types, age groups, and outcomes; as a result, not all tallies equal 18. The 18 studies included in this table are in the References Section of this report and are identified with an asterisk.

NEA Research Grants Portfolio: Awards Benefiting Research into Early Childhood Development

The National Endowment for the Arts operates a Research: Art Works grants program that funds eligible organizations to conduct research on the value and/or the impact of the arts for individuals and communities. Below are examples of recent awards made in the area of the arts and early childhood development.

Omaha Conservatory of Music
Omaha, Nebraska

FY15: \$10,000

To support an evaluation of String Sprouts, a music education program that will improve school readiness and neurocognitive development in preschool and school-age children. With the University of Nebraska Medical Center, researchers will assess two versions of the String Sprouts program: 1) the original model (which features mandatory caregiver participation in class but does not mandate daily practice) and 2) the test model (which does not mandate caregiver participation in class but does mandate daily practice). Outcome measures include child receptive vocabulary, social and emotional development, parent-child closeness, executive functioning, kindergarten readiness, music skills, and performance in reading and math.

Regents of the University of Minnesota
Minneapolis, Minnesota

FY14: \$10,000

To support a two-part study that includes: 1) the development of a survey instrument that assesses early theater arts skills, and 2) an assessment of the instrument's validity with measures of school readiness. Measures of early theater arts skills and storytelling quality will be piloted in preschool classrooms in Minnesota that serve low-income children who participate in an early childhood theater arts program. This study will examine the extent to which theater arts skills are associated with school readiness.

West Chester University of Pennsylvania
West Chester, Pennsylvania

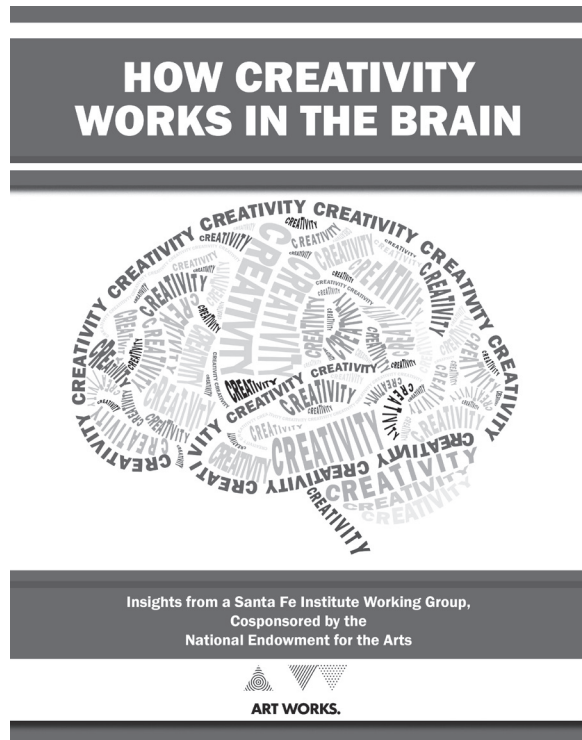
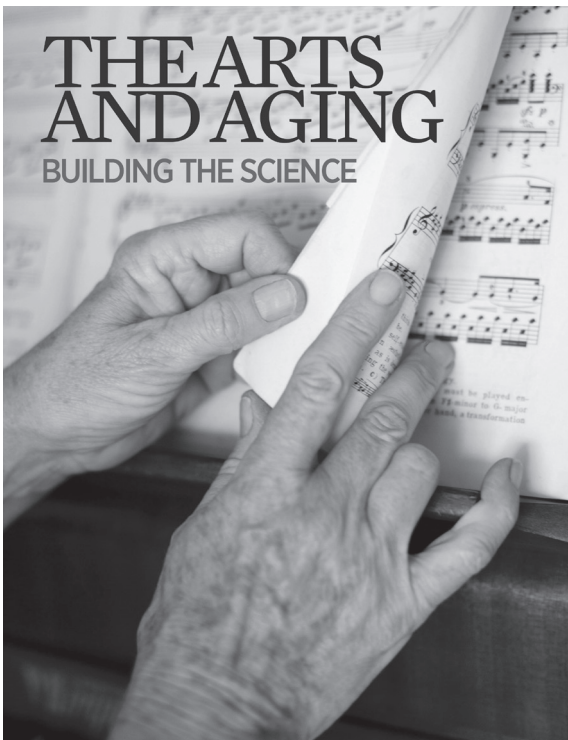
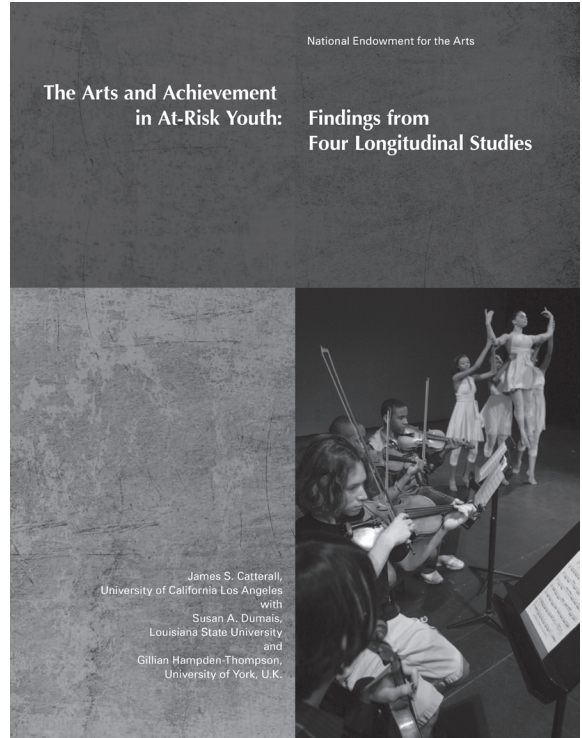
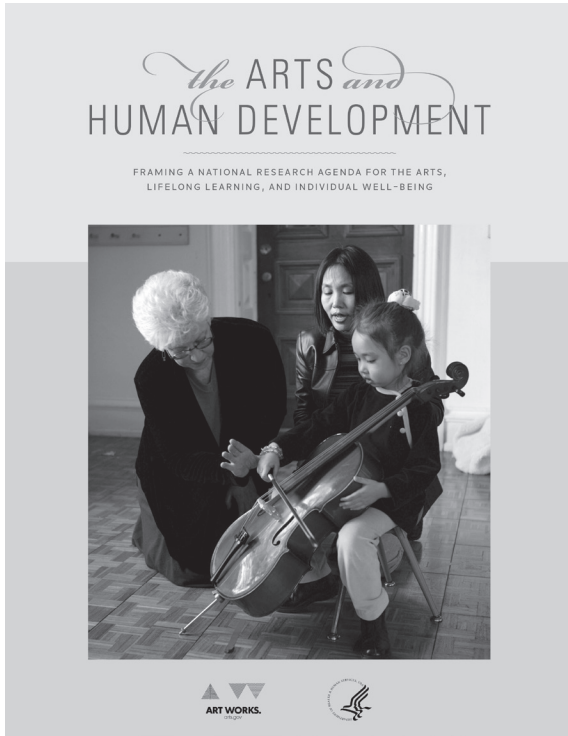
FY13: \$25,000

To support a study examining the physiological impacts of music, dance, and visual arts participation on economically disadvantaged children. More specifically, the study will examine the relationship between levels of the stress hormone cortisol and arts engagement among Head Start preschool students.

All Research: Art Works grantees are required to submit a research paper at the end of their grant period. The papers are then made available via the NEA website. See <http://arts.gov/artistic-fields/research-analysis/research-art-works-grants-final-papers>.

For grant application information and program guidelines, go to <http://arts.gov/grants-organizations/research-art-works>. To obtain a list of past Research: Art Works grants, use the NEA's online grants search tool: <https://apps.nea.gov/grantsearch>.

Related publications at arts.gov





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