

Current Music Research - USA

National Institutes of Health (NIH)/ National Endowment for the Arts (NEA)

(June 2022)

NIH-funded Music Research Projects 2019-2024

NIH awards \$20 million over five years to bring together music therapy and neuroscience (September 19, 2019)

<https://www.nih.gov/news-events/news-releases/nih-awards-20-million-over-five-years-bring-together-music-therapy-neuroscience>

Project Title	Awardee	Project Number	Start/End Year	Summary
Songmaking in a Group (SING): Music, Hallucinations & Predictive Coding	Yale University	MH123028-01	2019/2022	This research will determine if listening to, performing, and creating music helps people with psychosis learn to predict the world, themselves and others more accurately and reliably, which mollifies the distress associated with voices, and makes social relationships more manageable and enjoyable.
Sing for Your Saunter: Using Self-Generated Rhythmic Cues to Enhance Gait in Parkinson's	Washington University	AT010753-01	2019/2022	This project will examine the impact of music and singing on walking performance with the goal of understanding what types of rhythmic cues are most helpful to people with Parkinson's disease and older adults.
Music Appreciation after Cochlear Implantation	University of Southern California	DC018701-01	2019/2024	This project aims to characterize the emergence of music appreciation in people who have suffered hearing loss and have been provided with partial restoration of hearing through cochlear implantation. Music appreciation is complex and transverses multiple domains including hearing acuity, speech and language acquisition, and quality of life. By studying these relationships in people who have been given partial hearing restoration, we will clarify the role of music for promoting recovery from debilitating loss.
Music Training; Bilingualism and Executive Functioning	University of Southern California	NS114592-01	2019/2022	This study will investigate the effects of music training on the development of executive function skills, a core set of cognitive functions that allows the coordination of thoughts, decision making and planning, in a population of school-age children from under-resourced communities of Los Angeles.
Large-scale nested studies of the impact of music on brain and behavioral development	University of California, San Diego	AA028411-01	2019/2022	This project will test the impact of music training on the developing brain and behavior by analyzing existing data from the large-scale longitudinal neurobehavioral PLING/SYMPHONY study and initial data from the Adolescent Brain and Cognitive Development (ABCD) study.

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Following the Sound of Music-Comparing the Effects of Music vs. Non-Music Based Interentions on Auditory and Cognitive Processing in Older Adults	University of California, Irvine	1R61AG073668-01	2021/2022	The proposed research is relevant to public health in that it aims to achieve greater understanding of, and creation of music-based interventions for those suffering from age-related cognitive decline and hearing loss, which predict the development of Alzheimer's disease and Alzheimer's disease and related dementias (AD/ADRD). This research is aligned with the NIH mission of improving health and well-being of older adults who may be at risk to develop AD/ADRD, in that it seeks to understand underlying mechanisms and fundamental knowledge of how music is associated with speech-in-competition using innovative interventions that can be used on an outpatient basis aimed at mitigating the effects of age-related cognitive decline. Thus, the proposed research cuts across the bounds of numerous NIH agencies, with our framework contributing to the missions of the NIA, NCI, NEI, NIMH, NIAAAA, NINCD, NIDA, NINDS, in that all of these agencies work with populations who can gain direct benefits from successful approaches to mental fitness, and the NIH's greater mission to seek knowledge that will result in enhanced health and a reduced burden of disabilities.
The Role of Involuntary Repetitive Music Imagery in Memory Consolidation	University of California, Davis	NS114704-01	2019/2022	This research will examine the relationship of two prevalent music and memory phenomena, the vivid reliving of memories triggered by music and having fragments of music repeating, and how they may help to consolidate memories not only for the music itself, but also for non-musical information that has been associated with the music.
Impact of Music Improvisation Training on Brain Function and Cognition among Older Adults	UCSF	NIH R61	2021/2023	
Developing an animal Model to study Auditory-Motor Interactions During Rhythm Perception	Tufts University	NS114682-01	2019/2022	This research will lay the groundwork for an animal model to study beat perception, which would allow mechanistic investigation of the neural code underlying temporal prediction and informing rhythm-based musical interventions to enhance function in normal and disease states.

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Decreasing Delirium through Music (DDM) in critically ill older adults	Indiana University-Purdue University at Indianapolis	AG067631-01	2019/2024	This research will evaluate the efficacy of a music intervention on delirium/coma-free days among mechanically ventilated, critically ill older adults.
Evaluating the Impact of Singing Interventions on Markers of Cardiovascular Health in Older Patients with Cardiovascular Disease	Medical College of Wisconsin	AT010680-01	2019/2024	This award will conduct a clinical trial to assess the impact of singing as an alternative or adjunctive therapy to improve important cardiovascular health biomarkers.
Investigating the neural mechanisms underlying language recovery through rhythm therapy in aphasia	University of Texas, Dallas	DC018699-01	2020/2022	This study will attempt to identify the "active ingredient" in music interventions that aids language recovery, and determine how this therapeutic approach changes the brain.
Musical Rhythm Sensitivity to Scaffold Social Engagement in Autism Spectrum Disorder	Vanderbilt Medical Center	MH123029-01	2019/2022	This study aims to support the development of evidence-based music interventions for social communication in autism spectrum disorder (ASD), using infant-directed singing, music and rhythm to enhance understanding of social information delivered during naturalistic behavioral interventions for ASD.
Effects of Music Training on Auditory Processing and High-Frequency Hearing Abilities in Adolescent Musicians	University of Rochester	DC018700-01	2019/2022	This study will examine the reported enhanced perception of sound by musicians, and what components of music training and learning impact sound processing.

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Biologic Mechanisms and Dosing of Active Music Engagement to Manage Acute Treatment Distress and Improve Health Outcomes in Young Children with Acute Lymphoblastic Leukemia	Indiana University-Purdue University at Indianapolis	NR019190-01	2019/2024	This study will examine changes in stress and immune function biomarkers in response to an Active Music Engagement intervention for young children (ages 3-8) with Acute Lymphoblastic Leukemia and their parents.
Effects of Music Based Intervention (MBI) on Neurodevelopment and pain Response in Preterm Infants	University of Minnesota	AT010712-01	2019/2022	This study will investigate the effects of prolonged music listening and whether it improves the sleep patterns, brain maturation, and response to acute pain in pre-term infants.
Effect of Music Intervention on Infants' Brainstem Encoding of Speech	University of Washington	NS114343-01	2019/2022	This research will investigate the neural consequences of early music intervention by following the development of of infants over time, looking at the “sensitive” period of auditory perception and how that high impacts our understanding of the general development of the auditory system.

NEA-Funded Music Research Projects 2022

Since 2010, the National Endowment for the Arts' research grants portfolio has focused on generating new knowledge about the value and impact of the arts. Now, through a series of <https://www.arts.gov/initiatives/nea-research-labs>

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The UCLA Arts Impact Measurement System	University of California, Los Angeles			The Research Lab at UCLA will develop a reliable, valid, flexible, and scalable Arts Impact Measurement System (AIMS), an assessment tool for integration with mobile devices. Using psychometrics, AIMS will measure self-reported health and well-being outcomes associated with arts participation.
Arts Research on Chronic Stress Lab (ARCS)	Drexel University			Drexel University will develop a NEA Research Lab titled Arts Research on Chronic Stress Lab (ARCS) to explore the intersection of the arts, health, and social/emotional well-being.
Research on Equity via the Arts in Childhood (REACH)	West Chester University (PA)			The cooperative agreement will involve the design and implementation of a research agenda to address the following questions: a) Do high-quality musical experiences improve young children's capacity for self-regulation?; b) Are music-related improvements in self-regulation mediated or explained by changes in children's neurophysiological function?; Etc.
Improving Neurological Functioning in Autistic Children through Music	Molloy College			To support a study examining whether an improvisational music therapy program can improve outcomes for children with autism.
Effect of Music and Suggestion for Chronic Pain in Aging Adults: A Randomized Controlled Study	Baylor University			To support a randomized controlled study examining the effect of music on pain management in older adults.
Project Chroma	Rice University			In partnership with Musiqa, Rice University will establish a research hub for measuring the effects of music-making and music engagement on cognitive and social-emotional well-being.

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A Randomized Controlled Trial Utilizing the Arts to Improve Health, Resilience, and Well-Being in Individuals with Chronic Health Conditions in Underserved Neighborhoods	Cleveland Clinic			To support a randomized controlled trial examining the arts' ability to improve health, resilience, and well-being in individuals with chronic health conditions.
The Impact of Learning Music-Based Strategies on Caregiver Stress Levels and Caregiver/Infant Social-Emotional Competence: Demonstrating Feasibility Among At-Risk Families in Rural Appalachia	Ohio University Main Campus			To support a feasibility study examining the impact of music-based learning activities on at-risk caregivers and their infants in rural Appalachia.
Mason Arts Research Center	George Mason University			Studies will examine the outcomes of arts education in low-income, ethnically diverse high school students; the effect of theatre training on social skills; and students' sense of agency.
The Longitudinal Positive Effects Of Marching Band Participation On University Students From Different Racial/Ethnic Backgrounds	George Mason University			The study will assess student outcomes across three types of institutions: a Historically Black College and University (HBCU); a university with a racially/ethnically diverse student body; and a university with predominantly white students.

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Tuning the Heartstrings: Music Education, Persistence, and the Parasympathetic Nervous System	Play On Philly			Researchers will study the effects of music education on young children's persistence and their parasympathetic nervous system activity.
Early Academic Readiness and Learning Intervention (EARLI)	University of California, San Diego			The University of California, San Diego will establish a group of Early Academic Readiness and Learning Intervention (EARLI) studies that will test the influence of various school-day musical interventions on early childhood development.
Music Interventions for Children and Families: Social-Emotional Development and Well-Being	Vanderbilt University Medical Center			Vanderbilt University Medical Center will conduct studies in partnership with Treatment and Research Institute for Autism Spectrum Disorders, Nashville Symphony Orchestra, Nashville Opera, and VSA Tennessee, the state organization on the arts and disability.
Neural Substrates of Improvisation Across Different Artistic Domains	University of California, San Francisco			The Sound and Music Perception Lab at the University of California, San Francisco will conduct studies to identify neural substrates for creativity across a range of art forms. This lab's principal activity will involve collecting and analyzing data from "genius improvisers" in music, the visual arts, and comedy.
C Sharp B Sharp: Evaluating arts enrichment programming for people with dementia and their caregivers	Colorado State University			The quasi-experimental research project uses a waitlist-control group to isolate the effects of different types of performing arts experience (music, dance, and theater).

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Evaluating the effects of music education programming in low-income communities: A longitudinal randomized control study assessing executive function and social emotional development	Duke University			To support a randomized controlled study assessing the effects of orchestral programming on youth. The study will track the impact of this programming on students' social-emotional development, executive function (a set of mental skills that include working memory, flexible thinking, and self-control), and academic performance.
EpiArts Lab at the University of Florida	University of Florida, Gainesville			the University of Florida's Center for Arts in Medicine will develop an "EpiArts" Lab to apply epidemiological research approaches to the arts. The Lab will plan and implement a long-term research agenda to explore the relationships between arts/cultural engagement and population health outcomes
Exploring the mechanisms of group singing in persons with Parkinson's disease	Iowa State University of Science and Technology			Researchers hypothesize that group singing will yield improvements in clinical motor symptoms and positive changes in cortisol and inflammatory markers, and improvements in voice, breath control, and ability to swallow. The study also will analyze the relationships between motor symptoms and stress and brain activity in these adults.
Caregiving Research Institute	Arizona State University			The art forms and contexts are: 1) theater-making for parents and families of children with special needs, 2) technology-enhanced narrative expression for families of cancer patients, and 3) music for families of veterans suffering post-traumatic stress disorder.
Musical Bridges to Memory™: A music intervention for persons with dementia and familial caregivers	Institute for Therapy Through the Arts			To support a mixed-methods, experimental study examining outcomes of a music-based program for older adults with dementia and their caregivers.

JoshuaLeeds.com

(Pardon any omissions. Unintentional.)