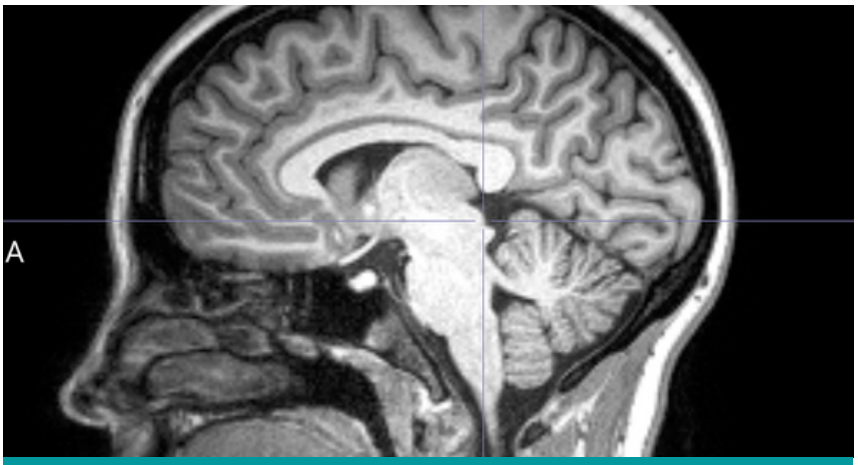
Aging Brain Cohort News

In This Issue



Updates

The Aging Brain Cohort is back on UofSC campus and continues collecting data for the repository on brain health across the lifespan. We have lots of data that will be shared at upcoming conferences and in future publications regarding the initial ABC data and the study on the impact of COVID-19. If you have participated in our ABC study recently, we will be sending your results out shortly!

Featuring

Genetics

MRI

Cognition

ABC is Enrolling! Participate Today!

https//abc.sc.edu

Collaborator Highlight

Roozbeh Behroozmand, Ph.D., is an Associate Professor of Communication Disorders (COMD) and the Director of the Speech Neuroscience Lab in the Arnold School of Public Health at the University of South Carolina. With a background in Biomedical Engineering and Neuroscience, Dr. Behroozmand's research is focused on investigating the neural bases of speech production and motor control in the human brain. This research has significant overlap with the UofSC Aging Brain Cohort project (ABC@UofSC) led by Dr. Julius Fridriksson, a close collaborator in the COMD Department.

The goal of this collaborative effort is to use electrophysiology (EEG), and functional neuroimaging (fMRI) to study sensory-motor mechanisms of speech in healthy individuals and patients with neurological disorders. The ultimate goal of this research is to gain knowledge that can be translated into the development of novel diagnosis and clinical treatment methods to enhance speech communication and improve quality of life in patients with speech disorders.

Educational Corner

While some cognitive loss is irreversible, emerging evidences suggest that certain aspects of brain health are reversible. Medications, trauma, depression and thyroid problems (linked to blood sugar levels) can impact performance on memory and attentional tasks.
The ABC study collects blood from all participants to evaluate the role of some of these factors in cognitive performance. Our blood panel includes evaluating vitamin B-12 levels, which helps maintain healthy nerve cells and red blood cells. A vitamin B-12 deficiency — common in older adults — can cause memory problems.

ABC TEAM MEMBERS

PhD Students

Similar to the collaborators of ABC that cross a variety of research disciplines, the doctoral students that work with the Aging Brain Cohort also come from different fields of expertise.

Samaneh Nemati

Communication Sciences and Disorders

Sam is a doctoral student in the Communication Sciences and Disorders Program at UofSC and helps the ABC team with collection and analysis of EEG/rfMRI data. She joined the Aphasia Lab and ABC team as a Research Associate and then continued working with them as a PhD student since Fall 2020.

Experimental Psychology

Nicholas Riccardi

Nick uses neuroimaging and brain stimulation to study how the brain is able to process and understand language. He is also interested in predicting language-related outcomes in survivors of stroke. "Working with ABC has allowed me to expand my research interests, and let me be a part of a knowledgeable, supportive team."

Makayla Gibson

Experimental Psychology

Makayla is an Experimental Psychology PhD student at the University of South Carolina and works in parallel with our research on aphasia and the aging brain. She is interested in the role of the cerebellum and white matter hyperintensities found in the brain as an indicator or recovery from stroke and age-related decline.

Linguistics

Sarah Wilson

Sarah Wilson is a MA/PhD student in Linguistics, with a concentration in Psycholinguistics. She received her Bachelor's in Linguistics from the University of Tennessee, Knoxville, and is completing her Master's at UofSC this fall. Her research focuses on lexical and syntactic processing, language and memory, and the neural basis of language.

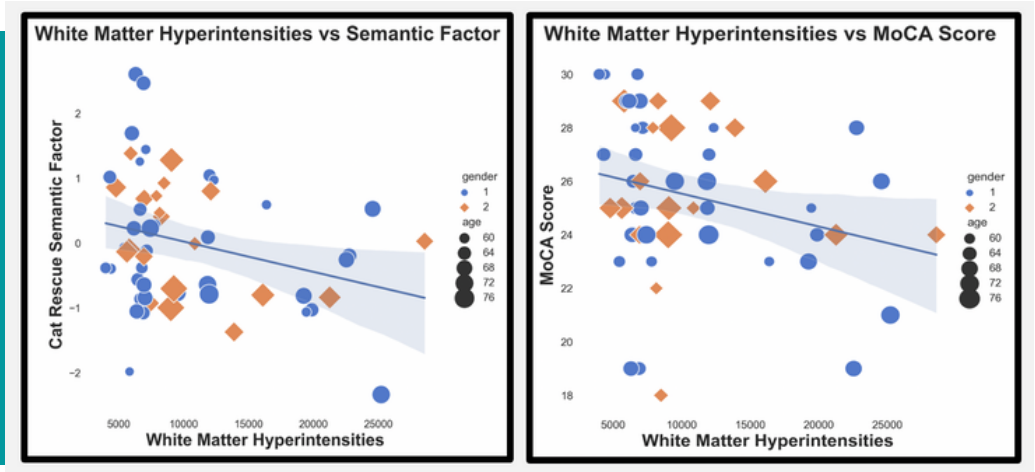
RESEARCH OPPORTUNITY!

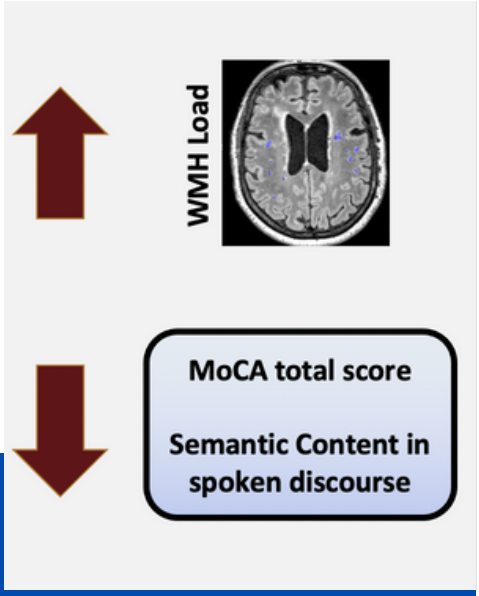
The Desai Lab at USC is recruiting adults over 50 years old: for a fully virtual study of cognition. Participants will be paid $40, it will last 1-2 hours, and it can be done in the comfort of your own home on a laptop or tablet. Please contact Nick Riccardi at riccardn@email.sc.edu if you are interested in learning more.

Research Updates

Our ABC team will be presenting preliminary results at an upcoming virtual conference (Society of Neurobiology of Language) in October. We have highlighted some of our key research below.

Leukoaraiosis and language later in life





Leukoaraiosis is a common finding on MRIs like those collected as a part of the ABC study. They show up as areas of increased brightness. Increased leukoaraiosis has been reported in dementia, cognitive decline, stroke, and aging.

Research has shown that the presence and extent of these 'white matter hyperintensities' (WMH) in the MRI are important for predicting clinical outcome, in terms of cognitive and functional impairment.

KEY FINDINGS:
Our preliminary data provides evidence that WMHs may predict language-related changes in normal aging and age-related mild cognitive impairment.

Personal discourse as an index for mental health and neurological impact of COVID-19

Using data we collected in our study on the neurological impact of COVID-19 on brain health, we used our participants' personal COVID-19 stories to predict the neurological and mental health effects of COVID-19.

Each word was classified as positive or negative, as well as into 7 categories of emotion. The % of negative words contained in the stories was related to higher anxiety, depression, sleep disturbance, and PTSD severity. More negative content in the COVID stories was also related to worse performance on cognition (e.g. MoCA performance) and language (word-finding).

To find out more information on SNL, please check out their website at https://www.neurolang.org/

SNL 2021 Virtual Edition
13th Annual Meeting of the Society for the Neurobiology of Language

UofSC Research Opportunities

project WORD

Does your 2nd grader... struggle to read, forget new words, need things repeated to them?

The SCROLL Lab is seeking participants for their research study, Project WORD. The study is examining word learning abilities in 2nd grade students who are demonstrating difficulty with reading and/or language skills.

If you are interested in receiving more information about this research opportunity, please contact the SCROLL Lab directly at: scroll@mailbox.sc.edu

https://sites.google.com/site/scrolllab/

SCROLL LAB
SOUTH CAROLINA RESEARCH ON LANGUAGE & LITERACY

Study on The Neural Basis of Vocal Sensorimotor Impairment in Aphasia

Are you a healthy adult between the ages of 21-80 years?

You can help us learn more about speech after stroke by participating in our EEG and behavioral study at UofSC located upstairs from the ABC testing suite.

The Speech Neuroscience Lab at the University of South Carolina is looking for individuals with no history of neurological, speech-language, or hearing disorders to participate in a research study to help us learn about the brain mechanisms supporting speech production and their impairment following a stroke.

If you would like to learn more please contact:

Kimaya Sarmukadam, PhD
UofSC Speech Neuroscience
803-777-9872
Email: BrainLab@mailbox.sc.edu

Arnold School of Public Health

ECHO LAB

Are you age **60 or older** ?
Can you walk **without other people's assistance**?
If this is you, please join our **Aging Gracefully Study**!

Requirements

- Wear an activity monitor and answer surveys on a smartphone for a total of 14 days
- Meet with research staff 3 times on campus
- Complete online surveys for 3 times
- Able to walk for 30 mins at a time without other's assistance (using a walker is fine).

Compensation and benefits

- Monetary compensation
- Feedback on your daily activity levels

Length of Study

Across 6 weeks

Interested in participating?

- Please Call: (803) 777-1088 Or email: uofscslowwalk@gmail.com
- A staff will contact you and screen for your eligibility to participate

Health Promotion, Education and Behavior

Arnold School for Public Health

Do you like to read?
Do you enjoy discussing books with others?

If so, the Intergenerational Book Club Study may be for you!
We want to find out if a book club helps people of different ages connect with each other, feel comfortable using computers and the internet, and enjoy life!

Requirements:

- Age 60 or older OR be a junior, senior, or graduate student at USC
- Participate in weekly book club meetings
- Answer brief surveys and questions
- Have a COVID vaccine

Duration:

2 to 10 weeks for 1 hour

Location:

- The Lourie Center
- Close-Hipp at the University of South Carolina

If you want to find out more, please call or email us: