University of Michigan Health System

MSU DEVELOPMENTAL Stuttering Project
RESEARCHING NEURAL PATHWAYS TO FLUENCY

MICHIGAN STATE UNIVERSITY
Department of Radiology

Introduction

The Speech Neurophysiology Lab is delighted to share with you our second newsletter! In this edition, we will update you on what is new in the lab as well as the progress we've made on some of our projects.

Welcome to the Project: Megan Sheppard, MA, CCC-SLP

As we begin recruiting a new cohort of children ages 3-6 who do and do not stutter to participate in our longitudinal study of brain development, our research team is also growing! Our lab recently welcomed Megan Sheppard, MA, CCC-SLP, as a new research speech-language pathologist to our research team. Below, she talks about some of her new duties and thoughts upon joining our lab.

I am thrilled to be the newest member of the Developmental Stuttering Research Project! As a Speech-Language Pathologist, the opportunity to be a part of groundbreaking research in the field is an opportunity that I couldn't pass up. I am a graduate of Michigan State University (Go Green!) and received my Masters Degree from Western Michigan University. I have worked in the field for over 6 years in both medical and educational settings. My work with children has been the most rewarding but also left me with many questions about how to better serve the children that we work with. There are still so many unknowns in speech-language pathology, which is why I'm eager to be a part of a team that is making great strides toward finding answers. My hope is that our work will provide professionals and families with better information and techniques to assist children who stutter.

I can't wait for the opportunity to interact with the children and families dedicated to participating in the study and helping us with our important research. Working with children always makes each day a bit brighter and I'm thankful to have the opportunity to do so!

Megan Sheppard

Famous People who Stutter

Emily Blunt, an actress from movies such as *The Devil Wears Prada* and *Into the Woods* stutters. Emily has been very outspoken about her stuttering and received the American Institute for Stuttering's Free Voices, Changing Lives Award in 2009. You can watch her acceptance speech here: https://youtu.be/TJ2OUTns12I

Ed Sheeran, a Grammy award-winning pop musician known for his songs such as "Thinking Out Loud" and "Photograph" struggled with stuttering as a child and often speaks about how he believes that involvement with music has helped him become more fluent. You can listen to his thoughts on his childhood stuttering during his 2015 Free Voices, Changing Lives award acceptance speech from the American Institute for Stuttering: https://youtu.be/K_3r3SolyDs

If you are interested in learning about more famous people who stutter, The Stuttering Foundation has a large list of other celebrities: http://www.stutteringhelp.org/famouspeople

Our Current Studies

Longitudinal study of brain development in children who stutter

This study takes place at MSU and involves collecting behavioral and neuroimaging data from young children who do and do not stutter. Data are collected at multiple time points, so we can examine how aspects of brain and behavioral (e.g., speech, language, cognitive, motor, etc.) development differ between children who do and do not stutter. We expect this data will help elucidate factors associated with stuttering persistence versus recovery, which in turn could help guide development of novel interventions for stuttering in the future.

Brain Imaging Study of Fluent and Dysfluent Speech

This study takes place at our UM campus and aims to investigate brain activity associated with speech production in children ages 5-12 who do and do not stutter.

Family Genetics Study

This study will allow us to examine brain markers associated with gene mutations that may be correlated with stuttering that runs in families.

Twin Study

With help from the MSU Twin Registry, we are recruiting children who are twins who do and do not stutter for a study examining the extent of heritable versus environmental influences on brain differences associated with stuttering.

Non-invasive Brain Stimulation Study

Our HD-tDCS (high definition transcranial direct current stimulation) study is conducted at the UM campus and aims to determine the effects of brain stimulation on speech motor learning in adults who do and do not stutter.

http://www.neurostutteringresearch.com/participate2/

The Speech Neurophysiology Lab in the News

THE DANA FOUNDATION

Our research was recently featured on a well-known neuroscience organization's website, the DANA foundation. In the article, Dr. Soo-Eun Chang discusses potential neurological links to developmental stutter and other findings from the lab.

To read the DANA article online:
http://dana.org/News/Seeking_Clues_to_Stuttering_Deep_Within_the_Brain/

To learn more about recent news features and lab happenings, please visit: http://www.neurostutteringresearch.com/news/

Family Genetics Study Update

Saralyn Rubsam, MA, CCC-SLP, is our Family Genetics Study Coordinator and has spent the past year and a half meeting with many families from our Longitudinal Study. Here is an update regarding our progress.

We'd like to extend a big thank you to all the families who participated in our Family Genetics Study!

We have collected a total of 121 saliva samples from parents, siblings, children who stutter and children who do not stutter. Our response rate was almost 80% of all families enrolled in our Longitudinal Study, and we are so grateful for your support! The saliva samples combined with the family history questionnaires and MRI scans will provide valuable information to help us better understand the biological bases of stuttering. We are excited about this recent accomplishment and couldn't have done it without each and every one of you.

We are actively searching for more participants for each of our studies. If you are interested or know of anyone who might be interested in participating, please contact us!

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