

Speech-in-noise Perception in Autism and Fragile X

Status: RECRUITING

Eligibility Criteria

Sex: ALL

Age: 15 years to 35 years old

Healthy Volunteers: This study is also accepting healthy volunteers

Inclusion Criteria:

1. normal audiograms (PTA $\leq$ 20 dB HL)
2. corrected 20/20 vision (Snellen chart)
3. no history of premature birth (prior to 36 weeks gestation)
4. no medications known to affect EEG signal
5. English as the first language

Inclusion for the Autism group requires the following:

1) diagnosis of Autism Spectrum Disorder either based on previous ADOS administration and developmental history, or confirmed via ADOS and developmental history

Inclusion for the Autism + FXS group requires the following:

1. Documented PCR/Southern Blot genetic testing confirming full mutation FXS
2. Diagnosis of Autism Spectrum Disorder, per Autism group.

Inclusion for the Typically Developing group requires the following:

1. no siblings or parents with an Autism Spectrum Disorder or Fragile X Syndrome
2. no current neurological or psychiatric diagnoses
3. IQ over 75

Exclusion Criteria:

- Hearing loss or uncorrected vision loss
- history of premature birth (prior to 36 weeks gestation)

Conditions & Interventions

Interventions:

BEHAVIORAL: Mismatch negativity

Conditions:

Autism Spectrum Disorder, Fragile X Syndrome

More Information

Description:

The goal of this study is to identify which brain regions are active during speech-in-noise perception, as well as how those regions interact. The investigators are studying brain activation during speech-in-noise in autism and controls as well as individuals with Fragile X Syndrome. The main question[s] it aims to answer are: 1) How does the brain's response to background noise affect a person's ability to understand speech? 2) Can visual cues improve hearing in background noise? Participants will complete the following: * hearing tests * cognitive and behavioral measures * questionnaires about their symptoms * both passive and active hearing tasks while brain activity is recorded with a neuroimaging cap Results will be compared between individuals with autism with and without Fragile X Syndrome as well as individuals without autism.

Contact(s): Elizabeth Smith - elizabeth.smith3@cchmc.org

Principal Investigator:

Principal Investigator ID:

Phase: NA

IRB Number:

System ID: NCT06088589

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