

Project Title: The perception of sarcastic cues in persons with Autism Spectrum Disorder

1.1 Project Summary

This study examined differences in the processing of perceptual cues of sarcasm (facial expressions, intonations, written contexts, and combined cues in videos) between neurodivergent (ADHD and ASD) and neurotypical individuals. 152 participants (65 neurotypical, 63 ADHD, 14 ASD, and 10 other - not specified) were presented with isolated perceptual cues and asked to identify the intent of the cue as either sarcastic or sincere. Personality variables using the NEO-PI was also used to clarify group differences. Accuracy and reaction time were measured to determine group differences.

1.2 Student involvement

8 (3 paid/ 5 volunteers)

1.3 Dissemination and Knowledge Mobilization

All student researchers involved in this project (paid or unpaid) were given the opportunity to present different parts of this project at multiple conferences. The breakdown of dissemination was as follows: MRU Research Days: 8 posters, 2 talks CURE: 8 posters, 2 talks BASICS (Banff Annual Seminar in Cognitive Sciences): 4 posters Canadian Society of Brain Behaviour and Cognitive Sciences (CSBBCS; Toronto, ONT) - 3 posters

1.4 Project Outcomes and Impacts

Results of this study suggests that all groups are able to recognize sincerity more accurately and faster than sarcasm. Although there were no significant differences between the neurotypical and ADHD groups, regression analysis indicated that the two groups relied on different cues to differentiate between sincerity and sarcasm. Whereas neurotypical individuals relied more heavily on facial expressions, ADHD individuals were less consistent. Those individuals with ADHD who were on medication, relied on intonation to indicate the speaker's intent, whereas those who were not medicated varied on their reliance on different cues. This suggests that treating ADHD with medication may not only address attentional issues, but may also facilitate some of the social difficulties often associated with the disorder. The sample size for the persons with ASD was not sufficient to truly understand the differences in the processing of sarcasm.