Research Update from the NDL

New Cross-cultural Study of Communication in ASD

Much of the clinical and basic science research in autism spectrum disorder (ASD) is primarily conducted in Western countries—in the US and in the UK. However, given known cultural differences (e.g., analytical vs. holistic way of thinking, individualist vs. collectivist societal constructs), it is difficult to apply our knowledge of ASD based on Western societies to those in East Asian cultures. Our lab has begun a collaboration to study cross-cultural differences in ASD symptom expression, focusing specifically on language and communication skills. In our current project, we are using eye tracking during language tasks to understand how language and communication may be impacted by how we look at our world and vice versa. We are finding that individuals with ASD from the US fixate more on the setting and inanimate information of complex social scenes, when compared to control groups. Similar patterns emerged from Cantonese-speaking individuals with ASD living in Hong Kong, but the viewing patterns of the Hong Kong group differed in some important ways as well—Both ASD groups (in US and Hong Kong) focused more on elements of the scene’s setting (e.g., a small barn in the background) than controls in either culture. However, everyone from Hong Kong (both the ASD and control groups) looked at faces less than both groups from the US. Results suggest an interplay between cultural influence on visual attention. Findings also indicate how gaze differences observed in the US in individuals with ASD, may indeed be translated to non-Western cultures as well, and which may therefore influence language functioning in similar ways as we have found in our lab. Not only does this have far reaching implications for similarities between brain functioning, but also might mean that therapies established in Western cultures may be effective in non-Western societies as well. Keep an eye out for cross-cultural work in ASD coming from our lab soon!

Redefining the Perception of ASD in the workplace

The NDL welcomes a new lab member! An Evanston local, Ira has been extensively involved with the lab for several years since he first participated in one of our studies. Ira always has insightful information to share with us – from playlists of music he enjoys to anecdotes from his experience living with ASD. Ira lives independently and holds a full time position in the grocery business in addition to his work in the NDL. He is well-established in his professional career, but it hasn’t always been easy to get to where he is today. During his early jobs after college, Ira struggled to balance new changes of adhering to a schedule, interacting with customers, and living away from his family. As he got more accustomed to his routine, Ira was able to successfully navigate these changes and now says his jobs in retail have taught him professional discipline. During his time at the NDL, Ira says he has most enjoyed working alongside the members of our lab and having access to his own office space. He has found his strengths of organization and attention to detail to be essential to his work in the lab. When asked what he would share with other young individuals with ASD hoping to break into the workforce, Ira emphasized patience and exploration, noting that “not everyone is made to do the same things,” and that taking the time to find a job that is personally interesting will pay off over time. We are so thankful for Ira’s contributions to our lab! Stay tuned for upcoming newsletters where Ira will be writing his own column about his experiences!
Engaging with ASD Communities Across the Globe: Samui Learning Centre for Special Needs, Koh Samui, Thailand

Dr. Losh and graduate students Kritika Nayar and Shivani Patel traveled to the Samui Learning Centre for Special Needs to meet with Ms. Dalin Ruangaisoon, the founder and Director of the school, and her team. Ms. Ruangaisoon has put forth incredible effort to build the school up from scratch—she spearheads fundraising events independently (receiving little to no support from the Government), has engaged with the community to reduce stigma associated with having a child with a neurodevelopmental disorder, and has sought out staff members who volunteer their time and life to helping these children at the school. This school serves children with autism, Down syndrome, cerebral palsy, and other developmental conditions. During this visit, Dr. Losh and her doctoral students led workshops that were focused on clinical techniques used to target language development and assessment in the United States. Given limited resources available in Koh Samui and at the school, Ms. Ruangaisoon and her staff shared the unique challenges faced not only by the individuals at the school, but also by families and communities at large. These challenges included not accepting their child with a neurodevelopmental disorder, not understanding the various diagnoses, and not knowing how to or being equipped with the appropriate resources to educate and provide therapy to these children. In addition to the workshops, our team also had the very special opportunity to interact and engage with each of the students at the school, and model strategies that staff members may be able to use with the children! Visit specialneedsschoolsamui.com to learn more about Ms. Ruangaisoon and her team’s amazing work with the special needs community in Koh Samui!

Understanding Genetic Transmission of Subtle ASD Traits: Links to Important Cognitive Skills in Siblings and Parents

Some of our current work has been looking at siblings of individuals with autism. We submitted several projects to the International Society for Autism Research, and wanted to share some of our preliminary results. Using the Iowa Test of Basic Skills (ITBS), we found a pattern of academic performance in siblings of individuals with autism, where siblings had lower performance on language tests but no differences in reading or math compared to individuals without a family history of autism. This suggests that early academic language skills may represent an indicator of later developing social communication difficulties. We also looked at how siblings visually process and narrate a wordless picture book. We found that compared to individuals without a family history of autism, siblings looked more at the animate characters in story than at the background. Increased gaze to animate information related to poorer pragmatic (ie social) skills and poorer narrative quality, suggesting that siblings may not adequately capitalize on social information to support narrative production. This builds on our prior studies of parents of individuals with ASD where we observed similar patterns in ITBS performance and narration.