



# MOTOR & BRAIN DEVELOPMENT LAB



2020 Recap & Newsletter



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## Happy New Year!

Greetings and Happy New Year from the Motor & Brain Development Lab of the Waisman Center! We hope that despite the challenges presented this past year that you and your family are safe, healthy, and have found some unexpected moments of peace and happiness.

All of our in-person research projects are currently paused for the time being. We are eager to start in-person research as soon as possible, but we acknowledge that there are a lot of logistics involved to keep everyone safe. We are currently aiming for June 2021 but will let you know if this happens sooner!

We have some exciting updates to share with you, and we appreciate you taking the time to read about our progress!

# 2020 RESEARCH RECAP

## How do genes factor into autism & ADHD?

While in-person studies are on hold, we've been busy with our remote participation-based Neurogenetics Study! Its goal is to better understand how certain genetic factors and the brain contribute to autism spectrum disorder and attention-deficit/hyperactivity disorder.

To find out more on how to participate, please see the last section of our newsletter!



## Is quality of life different for those with autism?

In a recent review paper led by our new PhD student Emily Skaletski, she explored existing literature on the quality of life (QoL) for autistic adolescents and adults, specifically focusing on females. She found that autistic adolescents and adults consistently demonstrate lower self-reported QoL than the non-autistic population across a variety of ages.

This information can be used to find ways that OT practitioners can help promote QoL in autistic adolescents and adults. She also identified a key gap in the literature: the comparison of differences in QoL between autistic males and females. A lot more work to be done in this realm of research!

Citation: Skaletski, E., Bradley, L., Taylor, D., Travers, B. G., & Bishop, L. (accepted). Quality of life discrepancies in autistic adolescents and adults: A rapid review. American Journal of Occupational Therapy.

## Is daily life impacted by motor and sensory skills in autism, and if so how?

Our Spring 2020 graduate students from the Masters in Occupational Therapy program explored the relationship between motor, sensory, and daily living skills in children with and without autism. They also looked to see if motor skills impact daily living skills above and beyond sensory features.



Their findings showed a strong relationship between motor difficulties and all domains of daily living skills. Specifically, motor challenges were highly associated with skills related to dressing, bathing, cleaning, education, safety, health, and meal preparation. Both motor and sensory motor skills uniquely contribute to these challenges. This information can be used to develop supports for specific daily living tasks that might be most likely to be impacted by motor challenges.

Citation: Travers, B. G., Kissinger, L., Klans, N., Reynolds, A., Taylor, D., Ausderau, K., Skaletski, E., & Brown, J. (accepted). Associations among daily living skills, motor, and sensory difficulties in children with and without autism. American Journal of Occupational Therapy.

## Do IQ and sensory symptoms predict motor skills?

A study led by Ph.D. student Olivia Surgent examined what characteristics predict motor ability in autistic and non-autistic children. Though motor challenges were very common in the autism group (1 in 4 children on the autism spectrum met criteria for severe motor challenges), sensory symptoms and IQ best predicted motor skills. In fact sensory symptoms and IQ scores were even better at predicting motor ability than whether the child had a diagnosis of autism, indicating that motor challenges, while common in autism, are not specific to autism. Further, knowing a child's degree of sensory symptoms and IQ performance may be the best predictor of which autistic and non-autistic children will experience motor challenges. This information can be used to streamline identification and treatment of motor challenges in children.

Citation: Surgent, O. J., Walczak, M., Zarzycki, O., Ausderau, K., & Travers, B. G. (2020). IQ and sensory features predict motor ability in children with autism spectrum disorder. Journal of Autism and Developmental Disorders.





# LAB MEMBER UPDATES

## Meet Emily!



Emily Skaletski joined our team in September as a PhD student in Kinesiology (Occupational Science track). After graduating with her master's in 2017, Emily practiced full-time as a pediatric occupational therapist for about 3 years, now seeing just a few clients in their homes. While COVID-19 prevented Emily from getting to work with families in the lab right away, she looks forward to doing so when circumstances allow! In the meantime, she enjoys learning more about sex differences in motor and daily living skills.

## Past Lab Members - where are they now?



**Elisa Snyder** graduated with her bachelors in Kinesiology from UW-Madison in Spring of 2020. She's working towards her masters in occupational therapy at UW-Milwaukee where she also serves on the executive board for UWM's Diverse OT and the Student OT Association!



**Allie Engeldinger**, (formerly Allie Reynolds, masters in occupational therapy grad 2020) got married in September! She has finished 2 fieldwork placements, 1 at an outpatient pediatric clinic and 1 at an outpatient hand therapy. Now she is studying for her boards and hoping to find a job in outpatient pediatrics!



**Desiree Taylor** (masters in occupational therapy grad 2020) finished a clinical rotation at an outpatient pediatric therapy center working with children with neurodevelopmental disabilities. She recently started working with adults in acute care and in a holistic comprehensive whole health program focused on alleviating chronic pain.



**Nicole Klans** (masters in occupational therapy grad 2020) recently completed clinical rotations at 2 specialty care hospitals and clinics in Madison and Minneapolis. She's currently studying for her boards exam and applying to jobs in an inpatient hospital setting.

# LOOKING AHEAD TO 2021

## 17th Annual Virtual Waisman Center Day with the Experts: Autism

When: Saturday, January 23rd from 9:00 am to 10:30 am

Where: Live via Zoom, register to obtain link

Please register at [www.waisman.wisc.edu/event/experts-autism-2021/](http://www.waisman.wisc.edu/event/experts-autism-2021/)



Learn about the latest advances in autism research and services and hear from a panel of experts — individuals with autism and family members.

Our very own Dr. Travers will be presenting on recent behavioral and neuroimaging findings of the impact of a video-game based balance training to target motor challenges and core symptoms of ASD.

### Current Study Opportunity: Neurogenetics in Children

Interested in participating in our research again?

We are recruiting children and their parents who participated in our Hartwell and Brainy Movement studies for a new Neurogenetics study in collaboration with Dr. James Li.

- In this study, we will collect saliva from the previous participants and their parents. We will use the saliva to look at genetic information related to autism and related conditions. We will ask both a teacher and a parent or caregiver to answer questions about the child's behavior. We will combine this information with previously collected brain imaging and behavioral data. The whole study will take 2-2.5 hours to complete.
- The study can be completed remotely (by completing the interview by phone and mailing the saliva samples and questionnaires).
- Families will be compensated up to \$40 for their participation.

Interested and want to know more? Contact Brittany Travers or Oskar Zarzycki at (608) 263-2218 or [MotorLab@waisman.wisc.edu](mailto:MotorLab@waisman.wisc.edu).