

Zwicker Lab



JILL ZWICKER

WHAT'S IN THIS ISSUE:



- **Summer activities recap**
- **Upcoming research**
- **Recent publications**
- **DCD Advocacy initiatives**

The lab has had a busy summer and we are expecting a flurry of activity with new research studies exploring cutting edge interventions, evaluating assessment protocols, development of tools to support children with DCD and their families, and advocating for policy changes.

The success and direction of our research is always dependent on the children and families that we strive to support. I want to thank you for your ongoing dedication and gracious time participating in the studies at Zwicker Lab and contributing to the goal of improving services and supports for children with DCD and their families.

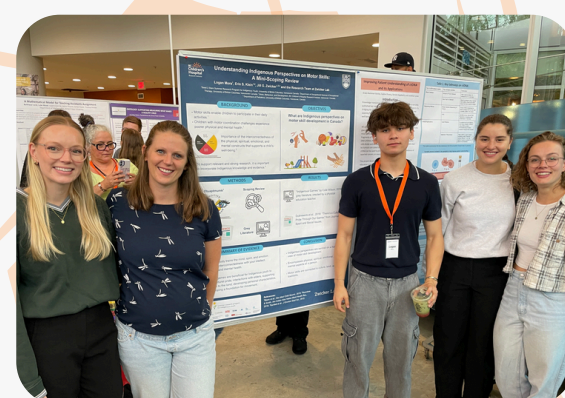
seed2STEM



summer research program
for Indigenous youth

Our lab was host to Logan Mora, a grade 11 high school student from the Sekani-Cree Nation, who participated in the Seed2Stem program through the University of British Columbia and Vancouver Coastal Health Research Institute.

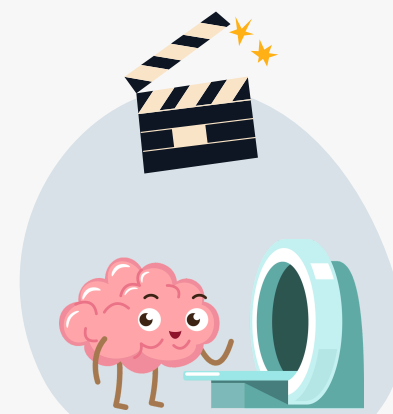
This program is a paid internship for Indigenous high school students to gain experience and opportunities to participate in research projects. Logan's project was a literature review on Indigenous perspectives on motor development. He created a poster to share his findings that was presented at a research symposium hosted by ICORD.





Movie-fMRI to Advance Biomarker Discovery in Developmental Coordination Disorder

This research study is a partnership between Zwicker and Vanderwaal Labs, using functional MRI to collect brain scan data while watching movies. Movies improve data quality and quantity in pediatric MRI studies, and allow us to study the brain while it is active and processing complicated information, just like it is in daily life. The goal of this research is to identify brain differences in DCD that could potentially lead to new interventions and diagnostic tools for children and youth.



**Now
recruiting!**



We are actively recruiting participants for this study and looking for **children ages of 8-10** with **motor coordination difficulties or a diagnosis of DCD**. Children will undergo an MRI scan and receive a \$25 gift card.

Parent Perspectives on the Prospect of Early Diagnosis of DCD and Future Care



As part of Olivia Tsihlias' PhD, she is conducting a study to explore the experiences of parents of children with DCD to identify barriers and facilitators to achieving an earlier diagnosis. By capturing parental perspectives, the study seeks to inform strategies for improving early identification and intervention for children with or at risk for DCD.

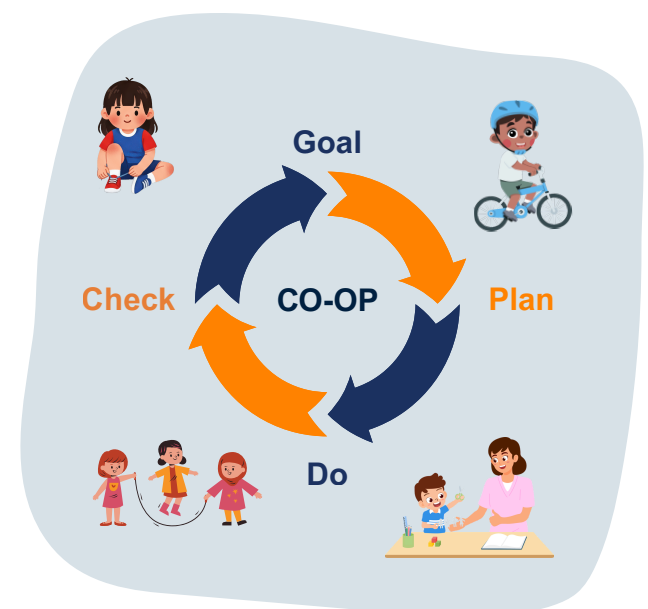
Interested parents will participate in a zoom interview with Olivia to discuss their experiences accessing a diagnosis and intervention for their child(ren). Participants will also have an opportunity to contribute to an infographic about the barriers and facilitators for DCD services, supports and recommendations to support policy change and clinical practice. Participants will be provided with remuneration of their time.



Modified CO-OP Intervention for Young Children with DCD: A Pilot Study Exploring Brain Changes with Intervention

Best practice for children and youth with DCD is a treatment approach called CO-OP; the Cognitive Orientation to daily Occupational Performance.

This approach uses problem solving, coaching, and guided discovery to help children and youth with DCD achieve their identified motor-based goals. The research we have done in our lab has shown that CO-OP improves participation and performance in motor-based activities, such as tying shoes, printing, riding a bike, and using cutlery. We also found that this intervention leads to positive changes in brain structures and connections.



ICAN
International Cognitive
Approaches Network Inc.



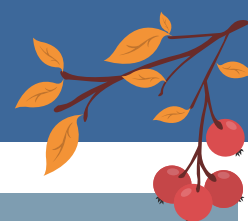
We know early intervention is important to address the challenges associated with DCD. In this pilot project, we will be evaluating the CO-OP approach for younger children with motor coordination differences, to see if this leads to positive changes in their motor skills.

In this study, we are recruiting children ages **3-5 years with motor coordination differences**. They will undergo two MRI scans (three months apart), get 12 sessions with an occupational therapist, receive a picture of their brain, and a \$25 gift card.

HOW CAN I SIGN UP?

If you are interested in participating in any of these studies, please contact **Gisela Gosse**, Research Coordinator:
ggosse@cw.bc.ca or **(604) 875-2345 ext. 5948**





Brain, balance, & coordination: Examining collision avoidance behaviours at a neural and behavioural level in children with DCD



Our recent brain imaging study looked at decision-making during collision avoidance in children **with and without DCD**.

We found children with DCD showed greater activation in frontal and visual areas of the brain, suggesting that they **use greater attentional resources** when trying to **avoid an approaching person**.

We also looked at how **children with and without DCD** physically avoid an approaching person.

Children with DCD left **more space** between themselves and another person, perhaps to compensate for their motor difficulties.



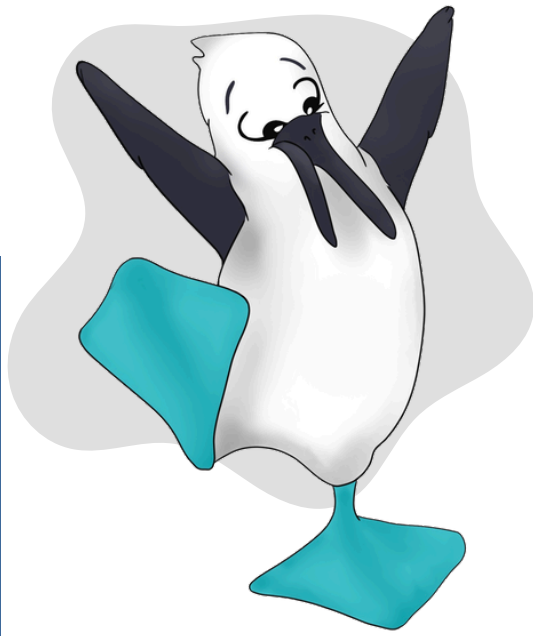
The results from this study demonstrates the need for interventions focused on outdoor mobility, such as road-crossing and pedestrian safety courses.

"Thank you to all the children and families who participated in this research! With your help we continue to increase our understanding of DCD through scientific discovery!"

- Dr. Rapos



DCD Awareness Week!



DCD awareness week is an opportunity to increase recognition of DCD and its impact on individuals and their families.



Wear **BLUE** or **TEAL** to show your support and help raise awareness!

Check out the **International Society of Research and Advocacy for Developmental Coordination Disorder: ISRA-DCD** for information and resources to participate in **DCD AWARENESS WEEK!**



<https://www.isra-dcd.com>



Social Media and DCD

DCD BC Parents

<https://www.facebook.com/groups/179042295871287>

Developmental Coordination Disorder (DCD)

<https://www.facebook.com/groups/1411517995735038>

DCD/Dyspraxia: One Step Forward Parent Chat

<https://www.facebook.com/groups/669991279753820>