

Screening, Tracking, and Assessing Coordination in Kids



Research has shown that many children with DCD develop emotional and mental health difficulties secondary to their lack of coordination. Until now, however, this research has been conducted with children who have been referred to clinical settings. In this study, funded by the CIHR, a team of researchers from *CanChild* are trying to determine whether children with DCD who are in the general population are experiencing elevated symptoms of anxiety and/or depression.

Many children who have DCD also have attentional difficulties (ADHD or ADD). The opposite is also true – about 50% of children with ADHD also have DCD but their motor coordination difficulties are often unrecognized. As part of this project, we will be figuring out whether there is a different impact

if children only have DCD, only have ADHD, or have both DCD and ADHD.

Over 3,000 children in Grades 4-8 have been screened for coordination difficulties using a short questionnaire that asks them about their participation and preferences for physical activity. Parents also completed a questionnaire about their child's coordination performing everyday tasks. Parents of children who may have coordination difficulties were then offered a chance to have an assessment of their child's motor abilities conducted in the family home. Parents and children who did have DCD and/or ADHD have provided information about how the children are feeling about themselves and about their participation in social and physical activities. Findings from this study will contribute to our understanding of the mental health difficulties that may accompany, or be secondary to, DCD. ✨

CanChild centre for Childhood Disability Research

is a research and educational centre founded in 1989 with funding from the Ontario Ministry of Health and Long-Term Care. Over the past two decades, *CanChild* has emerged as an international leader in the field of childhood disability through innovative research and a commitment to making research findings easily accessible. While the scope of *CanChild's* research is broad, the majority of our work is focused on issues that will make a difference for children and youth with physical, developmental and communication needs. To ensure *CanChild's* research addresses the real concerns of children, families, and communities, our team of researchers work in close partnership with:

- Children and youth with disabilities and their families
- Healthcare professionals who provide services for children and youth
- Organizations such as the Ontario Association of Children's Rehabilitation Services (OACRS), Community Care Access Centres (CCACs) and Boards of Education
- Researchers and university educators in Canada and around the world
- Policy analysts and decision-makers from government ministries, including the Ontario Ministry of Children and Youth Services (MCYS)



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CanChild today

VOLUME 1, FALL ISSUE 2008

Impacting Practice & Policy

Recent *CanChild* studies have strengthened partnerships and supported capacity-building leading to better outcomes for children with DCD and their families.

Actor Daniel Radcliffe has recently created awareness by speaking publicly about his experiences with dyspraxia, or Developmental Coordination Disorder (DCD). As noted in the *Globe and Mail* and in CTV interviews with Dr. Cheryl Missiuna at *CanChild*, children with DCD have significant difficulty performing everyday motor tasks such as printing, doing up buttons, tying shoelaces, throwing a ball or playing with other children on the playground. Five to six percent of school-aged children (more than 192,000 children in Ontario) experience frustration everyday trying to do school-related tasks and the most simple self-care activities. These daily stressors increase their risk for social isolation, depression and anxiety. Withdrawal from physical activity can also increase the likelihood of childhood obesity.



Although these difficulties may be noticed by both parents and teachers when the child enters school, waitlists for school health support in Ontario are extremely long. Partnering for Change, a new research study at *CanChild*, involves a partnership with government and stakeholders to design, implement and evaluate the feasibility of an innovative service delivery model for children with DCD. This pilot study, funded by the Ontario Rehabilitation Research Advisory Network (ORRAN), involves building community capacity by sharing knowledge with teachers and families about environmental adaptations and strategies to facilitate children's participation. Stakeholders and participants in this exciting pilot project include schoolboards, Community Care Access Centres (CCACs), teachers, families, and representatives from three Ontario ministries, among others. Stakeholders will meet at key points to review emerging evidence and agree upon next steps. Close partnering of all stakeholders throughout the research process will allow us to evaluate the feasibility of this model for children with DCD. ✨

inside

Knowledge Translation	2
Encouraging Resiliency in Youth	3
Screening, Tracking, and Assessing Coordination in Kids	4

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Funded by the Ontario
Ministry of Health and
Long Term Care





Knowledge Translation

Doing more with what we know

Improving primary care service delivery for children who have **Developmental Coordination Disorder ...**

With funding from the Primary Health Care Transition Fund, administered by the Ontario Ministry of Health and Long-Term Care, *CanChild* researchers designed an innovative knowledge translation program to bring research evidence about children with DCD into the offices of primary care physicians. Working with an occupational therapist, family physicians acquired the skills and knowledge necessary for effective management of these children and gained the confidence to apply these skills in practice. Prior to the study, 0.5% of the family physicians were able to recognize children in their practice who had DCD. Following the study, educated physicians were 90% accurate in identifying children who had motor problems and were able to share information with families.



The practice and policy implications resulting from this study include:

- A shared-care model was effective as a method of educating family physicians about how to identify motor coordination problems, diagnose children with DCD and provide better long-term management.
- Families were empowered by receiving education and became better able to understand and manage their child's needs.
- The model was shown to be cost effective and beneficial to families, providers and the system in that it decreased wait-times and improved the ability of parents to manage their child's needs.
- Shared-care and education of families decreased the need for referral to medical specialists.
- This shared-care model may be applicable for children who have other developmental health conditions in which primary care physicians and families need to be educated and empowered. ✨

DCD Resources For:

- Parents
- Educators
- Physicians
- Health Professionals
- Coaches
- Community
- & more...



ENCOURAGING



Over 3,000 parents, policy-makers, and therapists from over 100 countries visit the CanChild website each week. Documents on the website include past and current research, measures, articles, educational materials, summaries of research studies, and links to interesting sites.

More information on DCD can be found at www.CanChild.ca.

"We cannot thank you enough for the information you have provided our family about DCD. The information on your website brought much needed clarity to our family when all we seemed to have was confusion about what was going on with our daughter." —Parent

RESILIENCY IN YOUTH

For some children with DCD, lack of coordination continues through adolescence and adulthood. Little is known about what happens to youth during these years. A study conducted by investigators at *CanChild*, funded by the Canadian Institutes of Health Research (CIHR), explored the experiences of nine university students who have significant coordination difficulties. Strong pathways of resilience were found within young adults who used strategies to manage their motor dif-

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"The outcomes of this study provide a hopeful message about resiliency for individuals with DCD." —Parent

ferences. These coping strategies included finding a match between their abilities and activities, using humour, and persevering. As well, as adolescents matured, there were more options for social participation, increased access to accommodations in school and fewer environmental demands for coordinated physical performance. Although their coordination dif-

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WHAT PARENTS ARE SAYING ABOUT *CanChild*

This study has been fantastic. I can't thank you enough because you've given me the tools I need to get my son through.

— A parent, Ottawa, Ontario

