

ACOTUP Researcher Profile

Name of researcher: Cheryl Missiuna, McMaster

Degrees and professional qualifications (including fellowships):

PhD (Special Education); MSc (Educational Psychology); BSc (OT); OT Reg OT)

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[mcmaster.ca/FacultyStaff/Faculty/MissiunaCheryl/tabid/652/Default.aspx](http://www.srs-mcmaster.ca/FacultyStaff/Faculty/MissiunaCheryl/tabid/652/Default.aspx)

Area of research: My program of research focuses on improving service delivery and quality of life for children with developmental coordination disorder (DCD) and their families. This work is broad ranging from: increasing awareness of DCD through knowledge translation efforts (<http://dcd.canchild.ca/en/dcdresources/workshops.asp>); facilitating earlier identification of children with DCD in primary care and early childhood education settings; longitudinal studies of the secondary physical and mental health consequences of DCD; and health services studies with provincial Ministries to develop, implement and evaluate an OT service delivery model (Partnering for Change) that will hopefully transform school health support services in Ontario for children with DCD.

Research related awards and honors:

- John and Margaret Lillie Chair in Childhood Disability Research (awarded, 2014-19)
- Director, *CanChild* Centre for Childhood Disability Research (2006-13)
- Dr. John Whittaker Memorial Award for Contributions in Childhood Disability (2012)
- Ontario Ministry of Health Mid-Career Rehabilitation Scientist Award (2006-11)
- Faculty of Health Sciences Career Award (2005-06)
- Canadian Institutes of Health Research New Investigator Award (2000-05)
- Social Science and Humanities Research Council of Canada Doctoral Fellowship (1990-92)
- Easter Seal Research Institute of Canada Doctoral Training Grant (1990-92)
- University of Calgary Thesis Research Award (1985-86)
- Harris/Harding Memorial Scholarship for Graduate Study (1984-85)

Recent grants/funding history:

- Cairney, J., Missiuna, C., Timmons, B.W., (Co-PIs), Howard, M., Kwan, M., Price, D., Rivard, L., Veldhuizen, S., Wade, T., Wahj, G. (2013-18). Impact of developmental coordination disorder on the physical health of young children: A five-year study of motor coordination, physical activity, physical fitness and obesity. Canadian Institutes of Health Research (\$1,579,006).
- Missiuna, C. (PI), Pollock, N., Bennett, S., Camden, C., Campbell, W., McCauley, D., Gaines, R., Cairney, J. (2013-15). Implementation and evaluation of Partnering for Change, an innovative model that will transform health service provision for school-aged children with developmental coordination disorder. Ontario Ministry of Health and Long Term Care (\$994,600).
- Missiuna, C. (PI), Hecimovich, C. (Principal Decision Maker), Pollock, N., Russell, D., Cairney, J., Bennett, S., Ruttan, B. (Decision Maker), Gaines, R., & Rosenbaum, P. (2008-

- 11). Partnering for change (Demonstration Project): Promoting health and participation of school-aged children with developmental conditions in their communities. Canadian Institutes of Health Research (\$199,994).
- Missiuna, C., Cairney, J., (Co PIs), Hanna, S., Russell, D., Heath, N., Pollock, N., Law, M., Macdonald, K., Petrenchik, T., & Schmidt, L. (2006-10). Examining the co-occurrence of psychological problems in a population-based sample of children with developmental coordination disorder. Canadian Institutes of Health Research (\$290,558).
 - Missiuna, C. (PI), Rosenbaum, P., Law, M., Russell, D., Gorter, J., Kertoy, M., Wright, V., Hanna, S., Bartlett, D., Cairney, J., DeMatteo, C., Gaines, R., Klassen, A., Palisano, B., Petrenchik, T., Pollock, N., Stewart, D., Walter, S. (2006-09). CanChild, Centre for Childhood Disability Research. Ontario Ministry of Health and Long Term Care (\$1,757,209).

Research collaboration: One of the main reasons I accepted a faculty position at McMaster University was the presence of *CanChild*, Centre for Childhood Disability Research (www.canchild.ca). *CanChild* is an internationally renowned education and research centre that broadly addresses the issues and concerns of children and youth with disabilities and their families. When I joined *CanChild*, there were only a few scientists but they were progressive, had shared values and varied perspectives and were tremendous mentors. It was my privilege to serve as *CanChild's* Director from 2006-13, a time in which we were able to build capacity and strengthen our knowledge translation efforts. *CanChild* now has over 50 scientists and research associates and our evidence-based website is accessed thousands of times each week. My personal program of research has benefitted tremendously from my close research collaborations with Nancy Pollock, a McMaster faculty member and OT clinician scientist, and Cathy Hecimovich, a decision-maker in the Ontario health system, as we have developed and implemented Partnering for Change, a new model of OT service delivery in schools. I have also worked closely with Dr. John Cairney, who holds a Professorship in Child Health Research and this has resulted in a new research collaborative, the Infant and Child Health (INCH) Lab (www.inchlab.ca).

What is the most important thing in mentoring graduate students? I have learned that the most successful students are those who come with a clinical background and a passion to solve a particular problem, not just a general interest in my program of research. My job is to discover and nurture their strengths and to provide them with a wide range of scientific and academic experiences so they develop the skills that they will need to be successful and independent clinician scientists and faculty in the future, following their research passions, not mine.

Most significant publications:

- Missiuna, C., Pollock, N., & Polatajko, H. (in press). Strategic management of children with developmental coordination disorder. In J. Cairney (Ed.), Secondary Consequences of Developmental Coordination Disorder. Toronto, ON: University of Toronto Press. Although this is only a book chapter, I think it is the most comprehensive and important work that we have written in the last 20 years. Bringing together all of the research evidence about management of children with DCD (“what do we know?”), we outline the way in which services need to be graduated and organized across health care and education sectors and how they should be delivered to best support children with DCD and their families (“what should we do?”).
- Missiuna, C., Pollock, N., Levac, D., Campbell, W., Sahagian Whalen, S., Bennett, S., Hecimovich, C., Cairney, J., & Russell, D. (2012). Partnering for Change: An innovative

school-based occupational therapy service delivery model for children with developmental coordination disorder. Canadian Journal of Occupational Therapy, 79, 41-50.

This is the first paper to introduce the theoretical underpinnings and empirical basis of Partnering for Change (P4C), an evidence-based way for occupational therapists to deliver health services in school settings. It was important to our team to produce a publication that demonstrated not only the evidence-basis for this model but also to incorporate the results of a pilot study that fleshed out the details of the model, and confirmed that it was feasible.

- Missiuna, C., Pollock, N., Campbell, W., Bennett, S., Hecimovich, C., Gaines, R., DeCola, C., Cairney, J., Russell, D., & Molinaro, E. (2012). Use of the Medical Research Council Framework to develop a complex intervention in pediatric occupational therapy: Assessing feasibility. Research in Developmental Disabilities, 33, 1443-1452.
This paper describes the highly successful demonstration project that examined the introduction of Partnering for Change, a new model of OT service delivery, in 11 schools. The integrated knowledge translation approach, keeping stakeholders involved throughout, led not only to the success of the demonstration project but to interest in, and acceptance of, the results.

Tips would you give for new investigators: Clearly identify an area of passion, or at least a strong research interest – it usually takes a long time to build a successful program of research so make sure you are prepared to invest the energy to become an expert in your field. Publish as much as you can from your PhD or fellowship while you are developing your program. Look for opportunities to have time protected for your research and apply for them.

Identify two mentors – one who is knowledgeable in your research area and can mentor you around grant writing and building your research content area and team, the second who will mentor you around career development and managing other responsibilities (education, administration, service). Develop a 5 year plan and get feedback from your mentor(s) on how to achieve it. Review your plan at least annually and adjust depending on the funding environment.

Start by obtaining small grants that will support development of your ideas or pilot-testing. It is very difficult to get tri-council funding until you have conducted pilot work and demonstrated your ability to manage smaller grants as a PI. Invite a senior researcher to be a co-PI, if you are applying for medium-sized grants, as it is reassuring to the funder to see a senior person is supporting you, if you don't yet have a track record.

Resources/supports/training programs for new investigators: Join an existing team of researchers, if possible, or create a network – it is necessary to learn how to run a research team, how to write successful grants, how to manage and oversee a research project and much of this can be learned as a co-investigator. Training programs such as the Canadian Child Health Clinician Scientist Program or other networked training programs can provide you with an opportunity to build a national network and to get to know other experts in your field or related areas. Training programs that build your methodological skills (e.g., N'Vivo training; Structural equation modeling; Rasch analysis; Grant Writing workshops) are also useful.