2018

HEALTHY ACTIVE LIVING & OBESITY RESEARCH

ANNUAL REPORT

www.haloresearch.ca



ahaloresearch





TABLE OF CONTENTS

WELCOME FROM THE DIRECTOR	1
ABOUT HALO	2
Our History and Impact	2
Our Vision	3
Our Mission	3
Our Lines of Business	3
Research	3
Leadership	3
Training and Education	
Knowledge Translation	
Partnership	
Advocacy	
Good Governance	3
DR. JEAN-PHILIPPE CHAPUT	4
DR. GARY GOLDFIELD	5
DR. PAT LONGMUIR	6
DR. MARK TREMBLAY	7
HALO STAFF	8
GRADUATE STUDENTS	12
POST-DOCTORAL FELLOWS	17
HALO CLINICAL ASSOCIATES	18
AFFILIATE INVESTIGATORS	19
WHERE ARE THEY NOW – 2018 UPDATES FROM FORMER HALO'ITES	21
VISITORS AND INVITED SPEAKERS	24
STUDENTS AND VOLUNTEERS	25
HALO PHOTO GALLERY	26
2018 HALO HIGHLIGHTS	32
Cannabis Use Among Adolscents in Ontario	32
RAMPING UP NEUROCOGNITION (RUN): THE IMPACT OF A TEACHER-LED ACTIVE PLAY INTERVENTION ON KINDERGARTEN CHIL	DREN'S COGNITIVE, SOCIAL
AND EMOTIONAL DEVELOPMENT	33
CANADA'S FIRST "STATE OF THE NATION" REPORT ON CHILDREN'S PHYSICAL LITERACY	34
2018 PARTICIPACTION REPORT CARD ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH	35
IMPACTING CHILD PHYSICAL AND MENTAL HEALTH OUTCOMES IN CONGENITAL HEART DISEASE: A RANDOMIZED CONTROLLE	D TRIAL OF ENHANCED
Physical Activitiy Support in Clinical Care (PA Toolkit)	36
THE GLOBAL MATRIX 3.0 ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH	37
HALO'S WEB PRESENCE	38
ACTIVE HEALTHY KIDS GLOBAL ALLIANCE WEBSITE	39
SEDENTARY BEHAVIOUR RESEARCH NETWORK	40
STAFF AWARDS	41
DOST-DOCTORAL EFILOW, STUDENT FUNDING SCHOLARSHIPS AND AWARDS	<i>1</i> 1

SUMMARY OF RESEARCH FUNDING AND GRANTS	42
PEER-REVIEWED, REFEREED PUBLICATIONS	45
NON-PEER REVIEWED PUBLICATIONS	53
BOOK CHAPTERS	54
CONFERENCES AND INVITED PRESENTATIONS	54
MEMORANDA OF UNDERSTANDING	63
STRATEGIC PARTNERSHIPS	64
CONTACT US (STAFF LIST AS OF MARCH 31, 2019)	65



WELCOME FROM THE DIRECTOR



The Healthy Active Living and Obesity Research Group (HALO) at the Children's Hospital of Eastern Ontario (CHEO) Research Institute is proud to present its 12th annual report. HALO had another successful and productive year in 2018, continuing our commitment to improve the health and well-being of children and youth in Ottawa, Ontario, across Canada, and around the world. In 2018 we said good-bye to Kevin Belanger, Casey Gray, Clara Moore, Jeremy Walsh and Eun-Young Lee. We welcomed several others as you will see in this report. Of note, Eun-Young Lee began a tenure-track position as Assistant Professor at Queen's University and Christine Delisle Nyström obtained a position at the Karolinska Institute in Stockholm, Sweden. We had 6 graduate students complete their degrees (see page 12 for

the full list) furthering the reach and impact of the HALO extended family, and we welcomed several new graduate students to the group. The group continues to HALOize the workplace and "walk the talk" through a variety of healthy active work initiatives - all evidence of our commitment to healthy active living. HALO is proud to be the repeat winner of the Alex Munter Cup for road hockey dominance at CHEO and maintains the right to boast about this for at least another year!

In 2018, HALO researchers published the greatest number (112) and greatest quality (15 papers published in journals with impact factor >5) of manuscripts in the Group's history! As summarized in the "Highlights" section of the Annual Report, HALO had several notable achievements in 2018. These included the launch of the Canadian Assessment of Physical Literacy Second Edition (along with 14 peer-reviewed manuscripts in a special issue of *BMC Public Health*), the release and promotion of the 2018 ParticipACTION Report Card on the Physical Activity of Children and Youth, the release of the Active Healthy Kids Global Alliance "Global Matrix 3.0" in Adelaide Australia and Canada's first "State of the Nation" report on physical literacy. With the 2018 legalization of marijuana in Canada, Dr. Chaput and Hughes Sampasa-Kanyinga published an important paper on cannabis use among adolescents in Ontario. Dr. Goldfield continued his work with his RUN study (Ramping up Neurocognition), studying the impact of a teacher-led active play intervention on kindergarten children's cognitive, social and emotional development. Dr. Longmuir is examining how congenital heart disease impacts child physical and mental health outcomes with a randomized control trial of enhanced physical activity support in clinical care (PA TOOLKIT). Please also read the extensive list of awards HALOites received in 2018 (page 41).

In 2018 HALO signed inter-institutional Memoranda of Understanding with 3 organizations (for a total of 9) and hosted visiting scholars and students from Brazil, Sweden and the United States. In addition to Stephanie Carson's and Jackie Lee's weddings, HALO staff, students and alumni welcomed **TEN** babies to the extended HALO family in 2018 – see the special spread on this in the HALO Photo Gallery section of the Report.

Through research, leadership, knowledge translation, partnerships, training and education, and advocacy HALO works diligently to promote and preserve healthy active lifestyles while managing and treating childhood inactivity and obesity. This Annual Report provides a catalogue of the activities and accomplishments of HALO in 2018 and is intended to inform partners, stakeholders, funders, potential students and staff, and other interested parties about our group. It is available in print form upon request and also on our website at www.haloresearch.ca. HALO remains indebted to the donors, contributors, researchers, stakeholders, alumni and partners, who fund, facilitate, support and synergize our efforts. To all of you, please accept our most sincere thanks and our pledge to continue to work together for the health of our children.

Best wishes for a healthy, active 2019!

My

Mark Tremblay, Ph.D., D.Litt. (hons), F-CSEP, FACSM, CSEP-CEP Director, Healthy Active Living and Obesity Research Group (HALO), CHEO Research Institute Professor/Scientist, Department of Pediatrics, University of Ottawa President, Active Healthy Kids Global Alliance

ABOUT HALO

Our History and Impact

The Healthy Active Living and Obesity Research Group (HALO) was established in 2007 in response to the escalating obesity crisis and the increasing complexity of related co-morbidities. Today the HALO team consists of 16 staff (including 4 research scientists), a childhood obesity clinical team (Centre for Healthy Active Living), 19 graduate students, trainees, undergraduate students, and many community volunteers.

Some of our practice-changing contributions include:

 Development of the Kenyan International Development Study – Canadian Activity Needs Research Alliance (KIDS-CAN) 	Creation of the Centre for Healthy Active Living (CHAL)
Development of the Canadian Assessment of Physical Literacy (CAPL) and CAPL-2	 Development of the Canadian Physical Activity Guidelines and Canadian Sedentary Behaviour Guidelines
Development of the Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep - a world first	Development of Canadian 24-Hour Movement Guidelines for the Early Years
Creation of the Sedentary Behaviour Research Network (SBRN)	 Development of the Active Healthy Kids Canada Position Stand on Active Video Games for Children and Youth
 Contribution to the development of the Canadian Obesity Network's (CON) 5 As of Healthy Pregnancy Weight Gain 	 Development of an "Obesity in Preconception and Pregnancy" resource for maternity care providers
Creation of the Active Healthy Kids Global Alliance (AHKGA)	 Leadership/contribution to Ottawa Public Health's Childcare Healthy Eating and Active Living Guidelines
Position Statement on Active Outdoor Play	Co-creation of the Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth which is now the ParticipACTION Report Card
Development of the Edmonton Obesity Staging System for Pediatrics	Co-founders of Outdoor Play Canada
Co-developers of Expert Statement on Physical Activity and Brain Health in Children and Youth	 Development and publication of SBRN Terminology Consensus Project

Since its inception in 2007, HALO has received over \$17 million in research funding; produced more than 775 peer-reviewed publications; has given more than 1300 scholarly presentations locally, nationally and internationally; and secured more than 2 billion media impressions!

HALO ANNUAL REPORT 2018 2 CHEO – RESEARCH INSTITUTE

Our Vision

HALO will...

Provide international leadership and research excellence as it relates to healthy active living and obesity in children and youth.

Our Mission

HALO will...

Be a multidisciplinary centre of excellence in healthy active living and obesity research for children and youth that will:

- Advance the understanding and promotion of health and wellness where children live, play and learn.
- Develop, evaluate, and mobilize innovative strategies to prevent, manage, and treat obesity and lifestylerelated diseases.

Our Lines of Business

Research

Promote and assess healthy active living among children and youth.

Identify, examine and address environmental, behavioural, psychosocial, and biological factors related to healthy active living and obesity in children and youth.

Develop, implement, and evaluate strategies to prevent, manage, and treat obesity and lifestyle-related diseases in children and youth.

Leadership

Be a credible, innovative, and authoritative source for child-focused healthy active living and obesity research, information and planning.

Training and Education

Be an internationally recognized centre for trainees, researchers and professionals interested in healthy active living and obesity research, leadership and advocacy for children and youth.

Knowledge Translation

Show leadership and innovation in translating, disseminating, and mobilizing child-focused healthy active living and obesity research.

Partnership

Use municipal, provincial, national, and international partnerships to create, promote, and evaluate healthy active living initiatives for children and youth.

Advocacy

Serve as a professional, informed, and authoritative voice to promote healthy active living and prevent obesity in children and youth.

Good Governance

Be effective, efficient, and transparent in all aspects of our work.



Education

- Postdoctoral Fellow, Department of Human Nutrition, University of Copenhagen (2010)
- Ph.D. in Kinesiology, Department of Kinesiology, Laval University (2008)
- M.Sc. in Kinesiology, Faculty of Physical Education and Sport, University of Sherbrooke (2004)
- B.Sc. in Biology, Faculty of Science, University of Sherbrooke (2003)

Academic Appointments

- Associate Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-Appointment, School of Human Kinetics, University of Ottawa
- · Cross-Appointment, School of Epidemiology and Public Health, University of Ottawa
- Cross-Appointment, Ph.D. Program in Population Health, University of Ottawa
- Adjunct Research Professor, Department of Health Sciences, Carleton University

Biography

Dr. Chaput's research focuses on obesity prevention and the adoption of a healthy lifestyle. He is also interested in new determinants of obesity such as lack of sleep and mental stress. Dr. Chaput has published more than 280 peer-reviewed scientific articles, has an h-index of 45 and >6,000 citations according to Scopus. He serves on many journal editorial boards and advisory committees, and contributed to a large number of conferences around the world (>150 lectures). He received several awards for his research, including the Canadian Society for Exercise Physiology (CSEP) Young Investigator Award (2016), the Roger Broughton Young Investigator Award from the Canadian Sleep Society (2015), the International Journal of Obesity New Faculty Award from the World Obesity Federation (2014), the New Investigator Award from the Canadian Obesity Network (2011), and the New Investigator Award from the International Association for the Study of Obesity (2010).

Research, Clinical, Professional and Scholarly Focus and Service

Current research interests include: i) childhood obesity; ii) sleep; iii) physical activity, sedentary behaviour and health; and iv) the promotion of a healthy lifestyle

- Academic Editor, PLOS ONE
- Editorial Board Member, Nutrition and Diabetes
- Editorial Board Member, Obesity Science and Practice
- President of the Chapter Executive Committee, Obesity Canada Gatineau-Ottawa Chapter
- Faculty Representative Obesity Canada Students and New Professionals University of Ottawa Chapter
- Leadership Committee Member for the development of the Canadian 24-Hour Movement Guidelines for the Early Years
- Steering Committee Member for the revision of the Canadian Society for Exercise Physiology—Physical Activity for Health (CSEP-PATH) Resource Manual
- Advisory Member for the Public Health Ontario's Healthy Kids Community Challenge Scientific Reference Committee
- Advisory Member for the Public Health Agency of Canada's Physical Activity, Sedentary Behaviour, and Sleep Surveillance Framework
- Co-Chair of the Pediatric Committee, Canadian Sleep and Circadian Network
- Report Card Research Committee Member, ParticipACTION Report Card on Physical Activity for Children and Youth
- Spokesperson for the release of the ParticipACTION Report Card on Physical Activity for Children and Youth
- Reviewer for many scholarly journals and granting agencies
- Senior Management Committee Member, CHEO Research Institute

Graduate Students, Supervision and Training

- Hugues Sampasa-Kanyinga (University of Ottawa) Ph.D. Supervisor (2017-)
- Caroline Dutil (University of Ottawa) Ph.D. Supervisor (2017-)
- Ryan Featherstone (University of Ottawa) M.Sc. Supervisor (2017-)
- Claire Johnson (University of Ottawa) Ph.D. Co-supervisor (2015-)
- Holly Livock (University of Ottawa) M.Sc. Supervisor (2016-2018)
- Jaime-Lee Yabsley (University of Ottawa) M.Sc. Supervisor (2016-2018)
- Catherine Pouliot (University of Ottawa) M.Sc. Committee (2017-2018)
- Lyra Halili (University of Ottawa) M.Sc. Committee (2017-2018)
- Shakibasadat Fatemi (University of Ottawa) M.Sc. Committee (2017-2018)
- Salomé Aubert (University of Ottawa) Ph.D. Committee (2017-)
- Taru Manyanga (University of Ottawa) Ph.D. Committee (2016-)
- Michael Borghese (Queen's University) Ph.D. Committee (2016-2018)

- Obesity Canada
- The Obesity Society
- World Obesity Federation
- Canadian Society for Exercise Physiology
- Canadian Sleep Society
- World Association of Sleep Medicine
- Canadian Sleep and Circadian
 Network
- Sedentary Behaviour Research Network

DR. GARY GOLDFIELD



Education, Credentials, Academic Appointments

- MA and PhD, Department of Psychology, Carleton University
- Post-Doctoral Fellow, Behavioural Medicine, State University of New York at Buffalo
- Registered Clinical Psychologist College of Psychologists of Ontario
- Associate Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-Appointment, School of Psychology, University of Ottawa
- Cross-Appointment, School of Human Kinetics, University of Ottawa
- Cross-Appointment, Department of Population Health, University of Ottawa
- Adjunct Research Professor, Department of Psychology, Carleton University
- Senior Scientist, Children's Hospital of Eastern Ontario Research Institute

Biography

Dr. Goldfield is a Senior Scientist with HALO and an Associate Professor of Pediatrics, Human Kinetics, Psychology and Population Health at the University of Ottawa. He is also a registered clinical psychologist practicing in the community and sees children, adolescents and adults. Dr. Goldfield began the childhood obesity research program at the CHEO Research Institute 17 years ago and is a founding member of HALO. He has held an Endowed Scholar Award from the CHEO Volunteer Association Board, a New Investigator Award from the Canadian Institutes of Health Research, and won an Award of Excellence as Outstanding Research Mentor from the CHEO Research Institute. Dr. Goldfield's main research interests involve evaluating novel behavioural and pharmacological interventions for the treatment and prevention of childhood obesity and related complications. He has published over 112 peer reviewed papers, has an hindex of 29 and >3,347 citations according to Scopus. Dr. Goldfield has over 150 scholarly conference presentations and published abstracts.

Research, Clinical, Professional and Scholarly Focus and Service

Current research interests include: i) childhood obesity treatment and prevention ii) psychological determinants and consequences of child obesity iii) effects of physical activity and sedentary behavior on body composition and mental health; iv) determinants of the rewarding value of food and eating behavior.

- Member, Canadian 24-hour Movement Guidelines Development Committee for the Early Years.
- Member, International Network on Eating Behaviour in Children
- Member Treatment and Research of Obesity in Pediatrics in Canada (TROPIC)
- Member, Advisory Board and Program Evaluation Committee, Centre for Healthy Active Living (CHAL) at CHEO
- Member of numerous graduate student thesis Committees and external examiner, University of Ottawa and Carleton University
- Reviewer for many granting agencies and academic organizations (CIHR, Canadian Diabetes Association, CHEO Research Growth Awards, CHAMO)
- Reviewer for many scholarly journals
- Registered clinical psychologist, College of Psychologists of Ontario

Graduate Students, Supervision and Training

- Kaamel Hafizi (University of Ottawa), M.Sc. Supervisor (2016-2018)
- Shakiba Bani Fatemi (University of Ottawa), M.Sc. Supervisor (2016-2018)
- Kent Bastell (University of Calgary), M.Sc Co-Supervisor (2016-2018)
- Angela Wilson (University of Ottawa) Ph.D. Supervisor (2010-2017)
- Marisa Murray (University of Ottawa) Ph.D. Supervisor (2011-2018)
- Fatima Mougharbel (University of Ottawa)-Ph.D. Supervisor (2017-2021)
- Luzia Jaeger Hintze (University of Ottawa)-Ph.D. Co-Supervisor (2012-2018)
- Fatme El Amine (University of Ottawa)-Ph.D. Co-Supervisor (2017-2020)
- Stephanie Leon (University of Ottawa), Ph.D. Committee (2012-2018)
- Jaime-Lee Yabsley (university of Ottawa), M.Sc Committee (2016-2018)
- Salma Mahmoodianfard (University of Ottawa)-Ph.D. Committee (2017-2021)
- Hugues Sampasa-Kanyinga (University of Ottawa)-Ph.D. Committee (2017-2021)
- Ryan Featherstone (University of Ottawa) M.Sc. Committee (2017-)
- Jane Booth (University of Calgary) M.Sc. Committee (2018-)

- College of Psychologists of Ontario
- Canadian Psychological Association
- American Psychological Association
- Obesity Canada
- The Obesity Society
- Sedentary Behaviour Research Network

DR. PAT LONGMUIR



Education, Credentials, Academic Appointments

- MSc (1985), Department of Community Health, University of Toronto
- PhD (2010), Institute of Medical Sciences, University of Toronto
- Post-Doctoral Fellowship (2011), Labatt Family Heart Centre, SickKids, Toronto
- Senior Scientist, Children's Hospital of Eastern Ontario Research Institute
- · Associate Professor, Dept. of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed, Dept of Human Kinetics, University of Ottawa
- · Cross-appointed, School of Graduate and Post-graduate Studies, University of Ottawa
- College of Kinesiology of Ontario Registered Kinesiologist
- Canadian Society for Exercise Physiology Certified Exercise Physiologist

Biography

Dr. Longmuir is a Senior Scientist in the Healthy Active Living and Obesity Research Group at the Children's Hospital of Eastern Ontario Research Institute. Dr. Longmuir's research interests are the promotion of physical activity to children with medical conditions and disabilities, and the use of physical activity to prevent and/or treat morbidity. Her undergraduate, Masters and Ph.D. theses examined the impact of interventions to increase physical activity among children with heart defects or cystic fibrosis. Dr. Longmuir's post-doctoral fellowship was a community health promotion initiative targeting parents of young children. Dr. Longmuir has published more than 60 papers and 6 book chapters in the peer-reviewed literature. She has delivered over 150 scholarly conference presentations, and more than 80 invited and keynote addresses.

Research, Clinical, Professional and Scholarly Focus and Service

Current research interests include: i) pediatric exercise medicine, ii) role of physical activity in the physical and mental health of children with cardiac conditions, iii) physical literacy and health, iv) physical activity among children with medical conditions and disabilities, v) motivation for physical activity in paediatric clinical populations, vi) patient and family engagement, and vii) knowledge translation and mobilization.

- Invited member of the Canadian Society for Exercise Physiology Physical Activity and Lifestyle Appraisal Strategic Planning Committee
- Member of the Writing Committee on the Promotion of Physical Activity Participation in Children and Adults with Congenital Heart Disease of the American Heart Association
- Invited member of the Ontario Trails Coordinating Committee
- Member of the City of Toronto Department of Parks, Forestry and Recreation Disability Advisory Committee
- Reviewer for many scholarly journals, including Circulation, Heart, Paediatrics and Child Health, BMC Public Health, American Journal of Cardiology, and PLOS ONE
- Faculty and course development for undergraduate, graduate and post-graduate education courses related to recreation and fitness access, inclusion of people with disabilities, accessibility of natural environments, and accessibility of public rights of way

Graduate Student Research Supervision and Training

- Angelica Blais (University of Ottawa) Ph.D. candidate (2018-2022)
 Active lifestyles via community sport for children with medical conditions
- Joel Blanchard (University of Ottawa) Ph.D. candidate (2018-2022)
 Motor skill assessment of children/adolescents with(out) medical conditions
- Kevin Moncion (University of Ottawa) M.Sc. (2016-2018)
 Physical activity and exercise in paediatric cardiomyopathy
- Tyler Kung (University of Ottawa) M.Sc. candidate (2016-2019) Exercise capacity and physical activity in cyanotic congenital heart disease
- Jacqueline Lee (University of Ottawa) M.Sc candidate (2017-2019)
 Exercise and executive function in adolescents with mental health problems

Graduate and Undergraduate Student Clinical Supervision and Training

- Amandalie Alexander (U. of Ottawa) Bachelor of Human Kinetics (2018)
- Lorraine Aston (U. of Ottawa) M.HK. Intervention & Counselling (2018)
- Keely Barnes (U. of Ottawa) M.HK. Intervention & Counselling (2018)
- Chiranjeev Jha (U. of Ottawa) M.HK. Intervention & Counselling (2018)
- Alexandre Laviolette (U. of Ottawa) M.HK. Intervention & Counselling (2018)
- Cristina Leonardelli (U. of Ottawa) M.HK. Intervention & Counselling (2018)
- Nicholas Moroz (U. of Toronto) Masters of Health Promotion
- Julia Peng (U. of Ottawa) Bachelor of Human Kinetics (2018)

- North American Society for Paediatric Exercise Medicine
- Canadian Society for Exercise Physiology
- American Heart Association
- American College of Sports Medicine

DR. MARK TREMBLAY



Education, Credentials, Academic Appointments

- MSc and PhD, Department of Community Health, University of Toronto
- Canadian Society for Exercise Physiology Certified Exercise Physiologist
- Full Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Faculty appointment in Ph.D. Program in Population Health, University of Ottawa
- Senior Research Scientist, Children's Hospital of Eastern Ontario Research Institute
- Adjunct Professor, School of Public Health, University of Toronto
- Adjunct Research Professor in the Department of Health Sciences, Carleton University
- Visiting Professor, Kenyatta University, Nairobi, Kenya
- · Visiting Professor, University of Strathclyde, Glasgow, Scotland
- Visiting Professor, Southwest University, Chong Qing, China
- Chief Scientific Officer, ParticipACTION
- Fellow of the American College of Sports Medicine
- Fellow of the Canadian Society for Exercise Physiology

Biography

Professor Tremblay is the Director of Healthy Active Living and Obesity Research (HALO) at the CHEO Research Institute and Professor of Pediatrics in the Faculty of Medicine, University of Ottawa. He is a Fellow of the Canadian Society for Exercise Physiology, Fellow of the American College of Sports Medicine and Adjunct/Visiting Professor at five other universities on four continents. Dr. Tremblay has published more than 450 scientific papers and book chapters and his published research has been cited >17,000 times according to Scopus. Dr. Tremblay received an honorary doctorate from Nipissing University, the Queen Elizabeth II Diamond Jubilee Medal, the Lawson Foundation 60th Anniversary Award, the Canadian Society for Exercise Physiology Honour Award, the Victor Marchessault Advocacy Award (Canadian Pediatric Society), and the Vic Neufeld Mentorship Award in Global Health Research (Canadian Coalition for Global Health Research for his leadership contributions to healthy active living in Canada and around the world.

Research, Clinical, Professional and Scholarly Focus and Service

Current research interests include: i) pediatric exercise science ii) childhood obesity iii) physical literacy and health iv) physical activity, fitness and health measurement v) sedentary physiology vi) health surveillance vii) knowledge translation and mobilization.

- President of the Active Healthy Kids Global Alliance
- Founder of the Sedentary Behaviour Research Network (SBRN)
- Chair and Cofounder of Outdoor Play Canada
- Chief Scientific Officer and spokesperson for the ParticipACTION Report Card on Physical Activity for Children and Youth
- Chair, Scientific Advisory Committee and Steering Committee for the Canadian Assessment of Physical Literacy Project
- Member, ParticipACTION Research Advisory Group
- Member, Expert Advisory Committee of the Canadian Health Measures Survey, Statistics Canada
- Invited member of the World Health Organization's 24-Hour Movement Guidelines for the Early Years Guideline Development Group
- Invited member of the Australian 24-Hour Movement Guidelines for Children and Young People and the Early Years Guideline Development Groups
- Member of the CIHR College of Reviewers
- Reviewer for many scholarly journals, granting agencies, and tenure and promotion applications

Graduate Students, Supervision and Training

- Taru Manyanga (University of Ottawa) Ph.D. Supervisor (2015-2019)
- Salomé Aubert (University of Ottawa) Ph.D. Supervisor (2015-2019)
- Silvia Gonzalez (University of Ottawa) Ph.D. Supervisor (2017-2020)
- Jeremy Walsh (University of Ottawa) PDF Supervisor (2017-2018)
 EunYoung Lee (University of Ottawa) PDF Supervisor (2017-2018)
- Christine Delisle Nyström PDF Supervisor (2017-2018)
- Michelle Guerrero (University of Ottawa) PDF Supervisor (2018-2020)
- Evan Turner (Carleton University) M.Sc. Supervisor (2018-2020)

- NASPEM
- CSEP
- ACSM
- Obesity Canada
- CPHA
- PHE Canada
- ISPAH
- ISBNPA
- SBRN (Founder)
- African Physical Activity Network
- International Physical Literacy Association
- Outdoor Play Canada (Cofounder)
- Kids Brain Health Network



KHEANA BARBEAU completed her Honours Bachelor with a specialization in Psychology at the University of Ottawa in 2016. She is currently a second year Ph. D student in Experimental Psychology at the University of Ottawa, where she conducts research on body image, stress, and eating behaviors at the Human Motivation Laboratory. In 2016, she joined HALO as a Research Assistant where she worked on systematic reviews examining the influence of physical activity and sedentary behavior on child and youth brain health indicators. In 2018, she returned as a Research Assistant to help conduct a scoping review on family indicators and movement behaviors (e.g., physical activity, sedentary behavior, sleep) among children and youth. During her spare time, Kheana facilitates group therapy at the Hopewell Eating Disorder Center in Ottawa and plays an active role in updating and adjusting their group therapy curriculum manuals. Outside of work, she enjoys traveling, hiking, kayaking, and spending time with friends and family.



Joel Barnes completed a B.Sc. in 2001 from the University of New Brunswick and a M.Sc. in 2003 from the University of Saskatchewan. In 2010, Joel joined HALO as Knowledge Synthesis and Analysis Manager. His main responsibilities include managing the ParticipACTION Report Card on Physical Activity for Children and Youth (www.participaction.com/reportcard) and providing web programming and data management services for the HALO suite of websites (www.haloresearch.ca, www.sedentarybehaviour.org, www.activehealthykids.org). Outside of work, Joel enjoys running, whitewater canoeing, fingerstyle guitar, home renovations and reading.



Kevin Belanger has a BSc and MSc in Human Kinetics from the University of Ottawa. Kevin's Master's work, completed at HALO under the supervision of Dr. Kristi Adamo, involved measuring cardiorespiratory fitness levels of children with obesity, and evaluating their risk profiles after the children were stratified by a newly developed pediatric obesity screening tool. Kevin re-joined HALO in the summer of 2014 as a Research Coordinator for the CAPL-RBC Learn to Play project. Kevin enjoys several active pursuits outside of HALO which include hockey, soccer, tennis, golf, football and more!



DR. JAMEASON CAMERON is a research coordinator with the HALO group, working under Dr. Gary Goldfield. Dr. Cameron attained his M.Sc. while at Montfort Hospital in the Behavioural and Metabolic Research Unit, and in 2013 completed his doctorate looking at the role of appetite-related hormones, food reward, and olfaction in predicting appetite and food intake in normal weight and obese adults. Currently he is coordinating a project titled "Ramping up Neurocognition (RUN): A Randomized Controlled Pilot Trial Examining the Effects of Physical Activity Promotion on Neurocognitive Development in Young Children". Dr. Cameron has also coordinated a now completed regulated drug trial examining the off-label use of the ADHD medication methylphenidate and its role in appetite and weight loss. Dr. Cameron's main interests are explored using randomized controlled trials, often in paradigms of energy depletion, with the intention of identifying how physiological and behavioural changes are inter-related in the context of weight loss and body weight regulation. New topics of interest include genetic association studies examining the role of dopamine and BDNF in responses to various exercise and clinical interventions.



STEPHANIE CARSON developed a true interest in preventative health after learning about the science of human health and the role lifestyle plays on health outcomes while completing her Bachelor of Health Science at the University of Ottawa. She began to look at physical activity, nutrition and healthy living as an investment, a proactive solution that can help reduce the burden of chronic lifestyle-related diseases and ultimately help improve quality of life. She moved on to pursue a Master of Science in Human Health and Nutritional Science at the University of Guelph. After completing her graduate degree she began working as a Clinical Researcher with the Ottawa Hospital Research Institute where she gained experience over the years as a Research Assistant, a Research Coordinator and a Research Manager. Stephanie is now working under Mark Tremblay as a Research Coordinator working on various projects including the SUNRISE Pilot Study and the Forest and Nature School Study. She is also working with the Outdoor Play Canada Leadership Group, the Child and Nature Alliance of Canada, and ParticipACTION. Stephanie loves to be active, warm weather, farmers markets and a fresh day planner. She is a very passionate health and wellness advocate who aims to inspire others in the community to live a healthy lifestyle.



NATASHA CINANNI graduated from University of Ottawa with a Bachelor of Science with honours in Human Kinetics. Since then she has been an active member of rehab and physical activity in her community. As a certified Kinesiologist, she enjoys creating personalized programs for injured individuals based on their rehabilitation needs, as well as providing education on muscles surrounding injured areas and their functional purpose. With her growing interest in physical activity promotion, Natasha now enjoys completing assessments and working to find healthy lifestyles for children with heart defects. With her love for children and physical activity, Natasha passionately works on the Toddler Study here at CHEO. Working under the supervision of Pat Longmuir, she helps with an array of projects: Access ON, CHEO Physically Literacy, Fearless, Putting PL, Exercise Counselling, ReACH, CSEP GAQ, Teen Cardiac, etc. Through the British Association of Teachers of Dancing, Natasha has completed her Associate Teachers Certification in tap, jazz, modern, stage and hip hop. Natasha continues to be an active member of the British Association of Teachers of Dancing by attending dance classes and teaching at Cumbrae School of Dance. She has been able to use all these acquired skills for several years to continuously aid in her extensive experience in community health, raising awareness to increase physical activity, and active rehabilitation.



MEGAN FORSE completed her Bachelor in Science with a specialization in Life Sciences at Queen's University in 2018. In 2016 she joined the HALO team as a summer student and returned in 2018 as a Research Assistant where worked on projects including the SUNRISE Study and the Forest and Nature School Study. Megan is returning to school in 2019 to complete her MBA at Dalhousie University with a specific interest in consulting and finance. Outside of work, Megan enjoys hiking, yoga, going to the gym and traveling with friends and family.



DR. CASEY GRAY joined the HALO team in March 2013 as Project Manager. Her main research areas are risky active outdoor play, systematic reviews, and guideline development. Casey moved to Ottawa in 2011 after completing her Ph.D. in Kinesiology at Western University where she examined psycho-social determinants of children's physical activity. Prior to this, she earned an MA in Applied Health Sciences from Brock University and a BHK in Leisure and Sport Management from the University of Windsor. Outside of work Casey enjoys being Ruby's mom and spending time at "the cottage".



HÉLÈNE LAROCQUE obtained her Certification as an Administrative Professional – with additional certifications in Organizational Management (November 2009), Microsoft Office Specialist (May 2013) and Technology Applications (September 2014) through the International Association of Administrative Professionals. She provides administrative, human resource and financial services assistance to the Director and the HALO team (since November 2010). Originally from Northern Ontario (Sudbury), she brings over 30 years of experience in office administration. She is an active volunteer within CHEO as the Staff Forum Co-Chair. Beyond her role with HALO, Hélène's passion and interest for walking the HALO talk is evident as she launched the Staff Forum Fit & Well Group (formerly Fit Club) organizing weekly walking group meetings and monthly Lunch and Learn sessions focused on healthy living. She most recently obtained her Certification as a Wellness Coach with the International Association of Wellness Professionals and is a Registered Health Coach with the Canadian Health Coach Alliance. She is also a long time active member (> 12 years) as a Community Team Member, Team Leader and Coach with reputable online fitness and healthy living programs. Other areas of interest include walking/hiking, swimming, dancing, traveling to sunny destinations, continuous personal development, teaching and writing.



CLARA MOORE completed her BSc in Human Kinetics in 2015 and MSc in Human Kinetics in 2017, both from the University of Ottawa. During her Masters Clara investigated different methods through which people can learn novel motor skills. Clara joined the HALO team in 2017 as a Research Assistant coordinating the Access ON project focusing on assessing and supporting the physical literacy of children with medical conditions and disabilities. Outside her work at HALO Clara enjoys running, biking, playing hockey and spending time with family and friends.



SOPHIA ROUBOS completed her BSc. in Kinesiology in 2016 at Queen's University. She then moved to Ottawa and completed her MSc. in Human Kinetics in 2018, where her thesis focused on the influence of exercise during weight loss on muscle remodeling. In June of 2018, Sophia joined the HALO team as a research assistant, coordinating the Access ON project. Outside of her work at HALO Sophia enjoys being active through Olympic weightlifting and CrossFit.



JENNA YARASKAVITCH completed a Bachelor of Science in Kinesiology at Queen's University in 2015. She continued on to pursue a Master of Human Kinetics (MHK) in Intervention and Consultation at the University of Ottawa. Jenna is a Registered Kinesiologist with the College of Kinesiologists of Ontario. She joined the HALO team as a Research Assistant in 2016. Jenna is responsible for the coordination of the Physical Activity ToolKit study which examines the impact of enhanced physical activity support in clinical care for youth living with congenital heart defects. Outside of her work at HALO, Jenna keeps busy as a competitive volleyball coach, participating in recreational sports, and being active outdoors with friends and family.

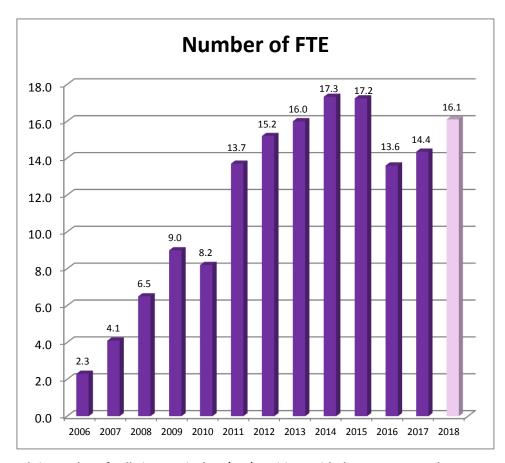


Figure 1: Trends in number of Full Time Equivalent (FTE) positions with the HALO Research Group over the years.

GRADUATE STUDENTS

HALO proudly displays the names of students who have completed their degree on a plaque in the main office. In 2018, the following 6 students were added to the plaque (for a total of 28 to date):

- Angelica Zoe Blais M.Sc.
- Holly Livock M.Sc.
- Jaime-lee Yabsley M.Sc.
- Kevin Moncion M.Sc.
- Marisa A. Murray Ph.D.
- Shakibasadat Bani Fatemi M.Sc.

Peter Breithaupt MSC 2011 Zachary M. Ferraro PhD -2012	Institut de Rederoke ser la	Institute Institute one and Observe features one Control of the Control on Co	Stephanie Prince Ware Prince P
Megan A. Carter	Danijela Maras	Cynthia K. Colapinto PhO ~ 2013 ~	Richard Larouche
PhD	MA		PhD
~ 2013 ~	- 2013 -		~ 2013 ~
Travis Saunders PhD - 2013 -	Kevin D. Belanger	Michael Borghese	Stella K. Muthuri
	MSc	MSc	PhD
	- 2013	- 2014 -	- 2014 ~
Aidan Gribbon	Kendra E. Brett	Christian Lizotte MSc ~ 2015 ~	Allana G. LeBlanc
MSc	PhO		PhD
~ 2015 ~	- 2015 -		~ 2015 -
Holly Ockenden MSc ~ 2015 ~	Greg Traversy MSc - 2016 -	Caroline Dutil MSc ~ 2017 ~	Darcie D. Valois MA ~ 2017 ~
Justin J. Lang PhD ~ 2017 ~	Alessandro Tirelli	Angelica Zoe Blais	Holly Livock
	MA	MSc	MSc
	- 2017 -	~ 2018 ~	~ 2018 ~
Jaime-lee Yabsley MSc ~ 2018 ~	Kevin Moncion MSc ~ 2018 ~	Marisa A. Murray PhD ~ 2018 ~	Shakibasadat Bani Fatemi MS: ~ 2018 ~



SALOMÉ AUBERT

Ph.D. Candidate

Supervisor:

Dr. Mark Tremblay

Research Program:

Ph.D. Population Health, University of Ottawa

Dissertation Topic:

Active Healthy Kids Global Alliance "Global Matrix" Initiative:

Process, Results, Impact and Evaluation



SHAKIBASADAT BANI FATEMI

M.Sc. Candidate

Supervisor:

Dr. Gary Goldfield and Dr. Eric Doucet

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Thesis Topic:

The effect of MPH on Energy Intake and Body composition.



ANGELICA BLAIS

Ph.D. Student

Supervisor:

Dr. Pat Longmuir

Research Program:

Ph.D. Human Kinetics, University of Ottawa

Thesis Topic:

Developing Physical Literacy while living with a Chronic Medical Condition: The Pediatric Perspective.



JOËL BLANCHARD

Ph.D. Student

Supervisor:

Dr. Pat Longmuir

Research Program:

Ph.D. Human Kinetics, University of Ottawa

Thesis Topic:

Moderate to Severe Congenital heart diseases and Canadian Agility and Movement Skill Assessment (CAMSA): the impact of physical activity and deep hypothermic circulatory arrest on motor skills development



CAROLINE DUTIL

Ph.D. Candidate

Supervisor:

Dr. Jean-Philippe Chaput and Dr. Anthony Carlsen

Research Program:

Ph.D. Human Kinetics, University of Ottawa

Thesis Topic:

Sleep Manipulation in Adolescents at Risk of Type 2 Diabetes (SMART2D) study



RYAN FEATHERSTONE

M.Sc. Candidate

Supervisor:

Dr. Jean-Philippe Chaput

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Thesis Topic:

Effect of a sleep intervention on mental health problems of adolescents who are at risk for type 2 diabetes mellitus.



SILVIA GONZÁLEZ

Ph.D. Candidate

Supervisor:

Dr. Mark Tremblay

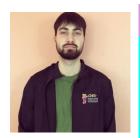
Research Program:

Ph.D. Epidemiology, University of Ottawa

Dissertation Topic:

Physical activity and sedentary behaviours among Colombian children and youth: Patterns, correlates and international

comparisons.



KAAMEL HAFIZI

M.Sc. Candidate

Supervisor:

Dr. Gary Goldfield

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Dissertation Topic:

Examining the effect of Methylphenidate on Energy Expenditure and Energy intake in obese populations.



TYLER KUNG

M.Sc. Candidate

Supervisor:

Thesis Topic:

Dr. Pat Longmuir and Dr. Kristi Adamo

Research Program:

M.Sc. Human Kinetics, University of Ottawa

The relationship between submaximal exercise capacity and physical activity behaviours in children with complex congenital

heart disease.



JACKIE LEE

M.Sc. Candidate

Supervisor:

Dr. Pat Longmuir

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Thesis Topic:

The effect of exercise on executive control: Improving the effectiveness of therapy for youth with mental

illness.



HOLLY LIVOCK

M.Sc. Candidate

Supervisor:

Dr. Jean-Philippe Chaput

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Thesis Topic:

Does exercising with a screen or music lead to post-exercise energy

compensation in adolescent boys?



TARU MANYANGA

Ph.D. Candidate

Supervisor:

Dr. Mark Tremblay

Research Program:

Ph.D. Epidemiology, University of Ottawa

Dissertation Topic:

Relationships between lifestyle behaviours and weight status in Mozambican children: a search to understand lifestyle transitions

in a developing country.



KEVIN MONCION

M.Sc. Candidate

Supervisor:

Dr. Pat Longmuir and Dr. Kristi Adamo

Research Program:

M.Sc. Human Kinetics, University of Ottawa

Dissertation Topic:

Investigating the exercise capacities and physical activity

behaviours in children with cardiomyopathy.



FATIMA MOUGHARBEL

Ph.D. Student

Supervisor:

Dr. Gary Goldfield

Research Program:

Ph.D. Population Health, University of Ottawa

Dissertation Topic:

Investigating the longitudinal impact of weight- based teasing in overweight and obese children and adolescents on mental health, disordered eating behaviour and eating disorders, and BMI longitudinally, and identifying the moderating effect of gender, weight status, social support and attachment on this relationship.



MARISA MURRAY

Ph.D. Candidate

Supervisor:

Dr. Gary Goldfield

Research Program:

Ph.D. Clinical Psychology, University of Ottawa

Dissertation Topic:

Screen Time Activities and Depressive Symptomatology Among Adolescents: A Longitudinal Investigation of Cognitive, Behavioural, Affective, and Interpersonal Factors.



HUGHES SAMPASA-KANYINGA

Ph.D. Candidate

Supervisor:

Dr. Jean-Philippe Chaput and DR. Ian Colman

Research Program:

Ph.D. in Epidemiology and Public Health

Dissertation Topic:

Movement behaviours and mental health in children and adolescents.



EVAN TURNER

M.Sc. Student

Supervisor:

Dr. Mark Tremblay

Research Program:

M.Sc. Health Sciences, Carleton University

Dissertation Topic:

SUNRISE Pilot Study: Canadian Surveillance Study of Movement

Behaviours in the Early Years



ANGELA WILSON

Ph.D. Student

Supervisor:

Dr. Gary Goldfield

Research Program:

Ph.D. Clinical Psychology, University of Ottawa

Dissertation Topic:

Identifying mediators and moderators of the obesity-depression

link in children and adolescents.



JAMIE-LEE YABSLEY

Supervisor:

Research Program:

Dissertation Topic:

M.Sc. Candidate

Dr. Jean-Philippe Chaput and Dr. Kristi Adamo

M.Sc. Human Kinetics, University of Ottawa

Validation of a child version of the three-factor eating questionnaire.

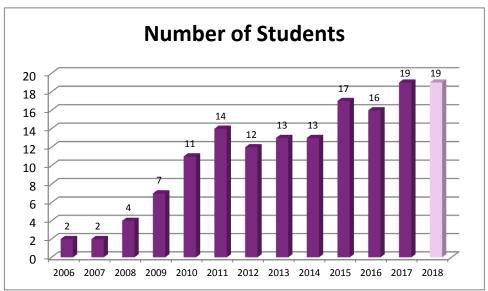


Figure 2: Trend in number of Full Time Equivalent (FTE) graduate students in the HALO Research Group over the years.



POST-DOCTORAL FELLOWS



DR. CHRISTINE DEUSLE NYSTRÖM joined the HALO Research Group in January of 2018 after completing her PhD degree at Karolinska Institutet in Stockholm, Sweden, where her thesis focused on obesity prevention in pre-school aged children. Her main research interests are early-life factors such as physical activity, sedentary behaviour, screen time, and diet that may be important for the establishment of childhood overweight and obesity. She also has an interest with how smartphones can be used to deliver interventions to promote a healthy lifestyle and prevent overweight and obesity in young children. Christine's main research at HALO is secondary data analysis within the Canadian Assessment of Physical Literacy project. Outside of research, Christine has an avid interest in sports and played bandy in the elite league in Sweden as well as with the Canadian team up until 2017.



DR. MICHELLE GUERRERO is a postdoctoral fellow with the HALO group. Her main research interests include: (a) children's outdoor play and learning, (b) disability sport and exercise, and (c) the promotion of healthy living via psychological techniques. To date, she has published 25 peer-reviewed journal articles and book chapters and delivered 38 scholarly presentations. Dr. Guerrero was one of two winners of the 2017-18 Governor General's Gold Medals at the University of Windsor in recognition of her academic excellence at the graduate level. Dr. Guerrero's primary research project at HALO focuses on the examination of the Forest and Nature School early childhood education program and its effect on physical, psychosocial, and cognitive outcomes. Outside of work, Michelle enjoys standup paddle boarding, yoga, boating, hiking, and travelling. She is an enthusiast of podcasts, music, coffee, and Netflix documentaries. She thinks she can sing and dance, and aspires to be Beyoncé.



DR. EUN-YOUNG LEE is a postdoctoral fellow with the HALO group. Her main research interests include studying the correlates and determinants of physical activity and sedentary behavior, and how these behaviors impact health and well-being among young people (0-17 years) within a culture and across cultures. To date, she has published 34 peer-reviewed articles and delivered 54 scholarly presentations. Dr. Lee's main research projects at HALO include 1) a pilot assessment of the impact of the Forest and Nature School early childhood education and program among children in the early years, and 2) the development of a self-report measure of active play for children aged 2-13 years. Outside of research Dr. Lee enjoys watching TV (in a reclined position), cuddling with her dogs, and tasting craft beer with friends. She is also a 3rd degree black belt in Taekwondo, avid skier, and amateur rock climber.



Dr. Shikha Saxena is a postdoctoral fellow with the HALO group. She is a physiotherapist by training and completed her PhD in Rehabilitation Science at McGill University, Montreal, QC. Her main research interests are to improve physical functioning in children with disabilities by using a combination of clinical and knowledge translation approaches. Her current project aims at exploring the perspectives of health and community professionals towards using physical literacy programs for children with disabilities across Canada. While at HALO, she also worked on another project that measured the physical literacy levels of children with medical conditions using the Canadian Assessment of Physical Literacy. Outside of research, she enjoys listening music, hiking, playing with her dog and spending time with family and friends.



DR. JEREMY WALSH joined the HALO team in September of 2017 after completing his PhD in exercise physiology at Queen's University in Kingston, ON. Broadly speaking, Jeremy's research has focused on understanding how a single session of exercise (aerobic or resistance) impacts brain health. Specifically, this research has focused on investigating the mechanisms by which exercise transiently boosts cognitive function and brain physiology in order to strategically use exercise to enhance brain function prior to a mentally challenging activity (i.e., in the classroom). During his graduate studies, Jeremy explored these questions in healthy young and older adults. While at HALO, Jeremy's research will focus on extending these investigations in children, and to examine brain function in children within the broader context of 24-hour movement behaviours. Outside of research, Jeremy has a keen interest in outdoor activities including trekking, camping, and cycling.

HALO CLINICAL ASSOCIATES



DR. ANNICK BUCHHOLZ is a clinical psychologist, and lead in outcomes management and research at the Centre for Healthy Active Living (CHAL). Dr. Buchholz was previously involved in the development of the eating disorder day treatment and inpatient programs at CHEO; and, along with her colleagues in eating disorders, implemented outcomes measurement for both these programs. Dr. Buchholz has also been involved in the development and evaluation of the prevention program 'BodySense'; a program aimed at promoting healthy body image in athletes. She is a coinvestigator on the REAL study, 'Research on Eating and Adolescent Lifestyles, an Ottawa-based longitudinal study examining shared risk factors between eating disorders and obesity in youth. Her research interests include psychosocial risk factors related to body image, stigma, disordered eating, and weight regulation in children and youth, as well as treatment outcomes.



DR. STASIA HADJIYANNAKIS is a pediatric endocrinologist and the Medical Director of CHEO's Center for Healthy Active Living. She is an Associate Professor of Pediatrics at the University of Ottawa and has been an active member of the Department of Pediatrics at CHEO in the division of endocrinology since November 2001. Her clinical, advocacy and research interests are in the area of pediatric obesity and related co-morbidities. Her research interests are in examining the interplay between behavioural/psychosocial, genetic and intrauterine factors in predicting risk for obesity related co-morbidities.



JANE RUTHERFORD graduated from the University of Guelph with a Masters in Nutrition, Exercise & Metabolism, and then worked in cardiac rehabilitation and sports medicine at the Ontario Aerobics Centre and was a Fitness Consultant at Guelph's Health and Performance Centre. Since its inception in 2010, Jane has been the Exercise Specialist for CHEO's Centre for Healthy Active Living where she works with families to create a balance between physical activity, sleep and screen time, helping them to achieve their best possible health – both mental and physical.

AFFILIATE INVESTIGATORS



DR. KRISTI ADAMO
Associate Professor & CIHR New Investigator
Associate Professor with Faculty of Medicine, Pediatrics
School of Human Kinetics, Faculty of Health Sciences
University of Ottawa
Ottawa, ON



DR. VALERIE CARSON
Associate Professor
Faculty of Kinesiology, Sport, and Recreation
University of Alberta
Edmonton, AB



DR. RACHEL COLLEY
Senior Research Analyst, Health Analysis Division
Statistics Canada, Government of Canada
Ottawa, ON



DR. KATIE GUNNELL
Assistant Professor
Department of Psychology, Faculty of Arts and Social Sciences
Carleton University
Ottawa ON



Dr. Amy LATIMER-CHEUNG
Associate Professor
School of Kinesiology and Health Studies
Queen's University
Ottawa, ON



RICHARD LAROUCHE, PHD
Assistant Professor, Public Health
Faculty of Health Sciences
University of Lethbridge
Lethbridge, AB



DR. MARGARET SAMPSONLibrarian
Children's Hospital of Eastern Ontario
Ottawa ON



DR. BRIAN TIMMONS
Associate Professor of Pediatrics
Canada Research Chair in Child Health & Exercise Medicine
McMaster University
Hamilton, ON



WHERE ARE THEY NOW - 2018 UPDATES FROM FORMER HALO'ITES

STACEY ALPOUS (2012-2016) is a Junior Policy Analyst in Policy and Government Relations at the Canadian Institutes of Health Research (CIHR). She is very thankful for the wonderful friendships and experiences that stemmed from her time at HALO.

KEVIN BELANGER (2011-2018) joined the Natural Sciences and Engineering Research Council of Canada (NSERC) as a Program Officer in May 2018. Kevin, along with four other Program Officers, oversees the Research Tools and Instruments Grant program which fosters the discovery, innovation and training capability of university researchers in the natural sciences and engineering by supporting the purchase of research equipment.

PRISCILLA BELANGER (2012-2014) is an Outreach Facilitator for the Ottawa Model for Smoking Cessation (OMSC) program at the University of Ottawa Heart Institute, Department of Prevention and Rehabilitation. She facilitates the implementation, evaluation and quality improvement of the OMSC in hospitals and clinics across Ontario and Quebec. She's also a mom to 2 wonderful kiddos!

MICHAEL BORGHESE (2010-2015) completed a PhD in Physical Activity Epidemiology at Queen's University. He now works at Health Canada as an Epidemiologist and studies the effects of prenatal exposure to environmental chemicals on the health of pregnant women and children.

CHARLES BOYER (2011-2014) is a Senior Researcher and Executive Network Manager at The Conference Board of Canada. He manages a professional network of employers from across Canada who lead health, wellness, and safety initiatives within their respective organizations. Charles still exercises with fellow HALO'ites at lunch time as his office is right beside CHEO.

PETER BREITHAUPT (2009-2011) is a Sessional Professor for the Fitness and Health Promotion program in Algonquin College's department of Wellness, Research, and Innovation. When not teaching, he runs Certified Personal Trainer workshops and certification courses for CSEP, does exercise stress testing for a local medical clinic, and spends any additional free time coaching competitive minor hockey or trying to keep up with his own fitness through a variety of sports.

KENDRA BRETT (2010-2015) is a Clinical Research Officer in medical devices at CADTH in Ottawa. CADTH is an independent, not-for-profit that provides objective evidence to health care decision-makers. In her free time, Kendra is the Director of the Environment Committee for her community association, and volunteers with a musical theatre company.

CYNTHIA K. COLAPINTO (2008-2013) is a Senior Scientific Advisor with Health Canada's Office of Nutrition Policy and Promotion. In this role, Dr. Colapinto leads the Evidence Review Team. Her team examines the scientific evidence that underpins the federal Healthy Eating Strategy, including the revised Canada's Food Guide policy, which was released in January 2019. Dr. Colapinto was also a principal writer on the 2019 Canada's Food Guide policy report. Dr. Colapinto analyses Canadian Community Health Survey - Nutrition data to describe dietary intakes in the Canadian population. Dr. Colapinto recently accepted a one-year assignment as a Senior Advisor to the Director General of the Policy, Planning and Integration Directorate in the Healthy Environments and Consumer Safety Branch at Health Canada.

RACHEL COLLEY (2008-2014) is now working as a Senior Research Analyst in the Health Analysis Division at Statistics Canada. Her work is still focused on health, physical activity and obesity research. While she is not at HALO anymore, Rachel continues to collaborate with HALO on a few projects.

ZACH FERRARO (2008-2012) is a resident obstetrical & gynecological surgeon (Ob/Gyn) at the University of Toronto. After completing his PhD with HALO, he completed his postdoctoral fellowship at the Ottawa Hospital Research Institute and his MD at the University of Ottawa. He continues to work as a clinician-investigator in reproductive sciences with a focus on nutrition, physical activity, and weight management in pregnancy. In his spare time he loves cycling, working out, and socializing with friends and family.

AMÉLIE FOURNIER (2013-2015) moved to Montréal, QC, in August 2015. She is now completing her fourth year of Dental School at McGill University.

HALO ANNUAL REPORT 2018 21 CHEO – RESEARCH INSTITUTE

KIMBERLY GRATTAN (2011-2016) is an Outreach Facilitator in the Department of Cardiac Prevention and Rehabilitation at the University of Ottawa Heart Institute. She helps facilitate the Ottawa Model for Smoking Cessation (OMSC) program in Primary Care settings throughout Ontario. Kimberly continues to stay connected to HALO through her deep-seated friendships and is grateful for the time she spent at HALO.

Casey GRAY (2013-2018) is a Clinical Research Officer at CADTH (the Canadian Agency for Drugs and Technologies in Health). Casey continues to promote outdoor play at every opportunity and is looking forward to welcoming a new little-HALO'ite in August.

NINA HEDAYATI (2017) is a PhD student in Psychology (Cognitive Neuroscience field) at Wilfrid Laurier University.

SONIA JEAN-PHILIPPE (2012-2013) is a registered dietitian working for Ottawa Public Health. Her work includes content development for social media platforms, nutrition support to parents in the community through Parenting in Ottawa Facebook and website, addressing public health issues such as the unhealthy food environment, marketing of food and beverages to children, food literacy and more. Sonia and Peter welcomed their first little one in the past year (Léala Breithaupt - March 13, 2018).

Justin Lang (2013-2018) is a Research Analyst at the Public Health Agency of Canada in the Applied Research Division. He helps conduct applied research to help inform policy decision making in the areas of mental health, substance misuse, and healthy living.

ALLANA LEBLANC (2010-2015) is an Epidemiologist with the Centre for Surveillance and Applied Research at the Public Health Agency of Canada. Allana is enjoying being in Ottawa with her family and has taken advantage of being so close to Gatineau Park and the Rideau Canal.

GENEVIÈVE LEDUC (2012-2018) is Programs and Evaluation Advisor for the FitSpirit Foundation whose mission is to help teenage girls discover the benefits and the fun of being physically active. She is enjoying living in Québec City and taking advantage with her family of the extraordinary amount of snow that covers the city every winter!

EUN-YOUNG LEE (2017-2018) is an Assistant Professor at Queen's University. Lee's research focuses on physical activity and population health in cross-cultural and global contexts, with specific interests in the levels and determinants of 24-hour movement behaviour in young people (0-17 years).

HOLLY LIVOCK can still be seen around the halls of the CHEO Research Institute. She has joined the Division of Orthopedic Surgery research team at CHEO. She enjoys her continuing friendships with the HALO group through lunches and the occasional road hockey game!

DANIJELA MARAS (2010-2013) is completing her PhD in Clinical Psychology at the University of Ottawa. Her doctoral research is supported by Mental Health Research Canada and examines group psychotherapy outcomes among adults living with chronic medical conditions at The Ottawa Hospital Rehabilitation Centre. Danijela and her husband are enjoying life with their daughter, Eliana, who is excited to become a big sister this summer.

KEVIN MONCION (2015-2018) is a Dual Degree Physiotherapy and PhD Student in Rehabilitation Sciences at McMaster University. Kevin enjoyed his time at HALO and remains in touch with many HALO'ites.

CLARA MOORE (2017-2018) is a Clinical Research Project Manager for the Complex Care Program at the Hospital for Sick Children. She is grateful for the experience she gained at HALO while having the opportunity to work with many individuals who share similar passions and interests for physical activity promotion.

NICHOLAS MOROZ (2018) is currently completing a Master's of Public Health degree at the University of Toronto. He enjoyed his summer practicum at HALO and continues to be inspired by the work that is being done there. He especially enjoyed the summer road hockey tournaments and the engaging atmosphere that promotes healthy living at HALO!

HALO ANNUAL REPORT 2018 22 CHEO – RESEARCH INSTITUTE

STELLA K. MUTHURI (2010-2014) now lives in Nairobi, Kenya, and works as a Research Specialist at the East Africa Research Hub of the Research and Evidence Division in the Department of International Development, UK. Stella continues to contribute towards improved options for healthy active living among school-aged children in the country and region. She is thrilled to be living close to her family and friends.

VERONICA POITRAS (2014-2017) is a Clinical Research Officer at CADTH (the Canadian Agency for Drugs and Technologies in Health). She remains passionate about healthy active living in both her personal and professional life, and continues to collaborate with HALO!

STEPHANIE PRINCE WARE (2008-2011) is a CIHR Health System Impact Fellow working with the Centre for Surveillance and Applied Research at the Public Health Agency of Canada and the Division of Cardiac Prevention and Rehabilitation at the University of Ottawa Heart Institute. Her research focuses on the measurement of sedentary behaviours and associations with cardiometabolic health, interventions to reduce sedentary behaviour in at-risk populations, and the influence of the built and social environments on physical activity and sedentary behaviour.

TRAVIS SAUNDERS (2009-2013) is an Assistant Professor and the Jeanne and J.-Louis Lévesque Research Professor in Nutrisciences and Health at the University of Prince Edward Island. His research focuses on the health impact of sedentary behaviour in children and adults.

KYLIE SCHIBLI (2017-2018) is currently completing a Masters in Social Work at Carleton, and when not studying she is busy running around chasing after her daughter Eva!! Once she started walking there was no stopping her!

DIEGO SILVA (2017-2018) is an Associate Professor at Federal University of Santa Catarina, Brazil. His research focuses on epidemiology of physical activity, health related physical fitness and body composition in global contexts. He loves beer and soccer!



VISITORS AND INVITED SPEAKERS



DR. DIEGO AUGUSTO SANTOS SILVAVisiting Scholar from Brazil – August 2017 to July 2018

Dr. Silva is a Brazilian Scientist with a multidisciplinary background. He completed his undergraduate studies (in Kinesiology) in 2007 by the Federal University of Sergipe. Brazil. During the Master's course in Kinesiology at the Federal University of Santa Catarina (UFSC), Brazil, he investigated the effect of high intensity physical exercise on obese children. In PhD studies in Kinesiology (UFSC), Dr. Silva investigated the relationship between obesity and hypertension in adults. Dr. Silva is interested in epidemiological studies and is part of different projects with researchers from Brazil, Canada, the United States and Portugal. He is an Associate Professor at the Federal University of Santa Catarina, Brazil, and has research projects in the areas of physical activity and health, body composition, sedentary behavior, and health-related Physical fitness. He is the leader of the Research Center in Kinanthropometry and Human Performance, Editor-in-Chief of the Brazilian Journal of Kinanthropometry and Human Performance, and he is anthropometrist level 3 of International Society the Advancement for Kinanthropometry (ISAK).



DR. BRIAN TIMMONS

Visiting Scholar from McMaster University – November 2017 to April 2018

Dr. Brian Timmons is Canada Research Chair (Tier 2) in Child Health & Exercise Medicine, and Associate Professor of Pediatrics at McMaster University. He is Research Director and Clinical Development Lead of the Child Health & Exercise Medicine Program, Associate Member in the Department of Kinesiology, and Investigator with CANChild Centre for Childhood Disability Research. Brian's research program examines 3 inter-related themes: translational science, clinical innovation, and public health, using a lab bench to park bench approach.

Dr. Timmons also presented at CHEO Grand Rounds in February 2018 "Physical activity recommendations for children with a chronic medical condition or disability: What is the evidence?"



DR. LEONARD EPSTEIN SUNY Distinguished Professor, Department of Pediatrics, Community Health and Health Behavior and Social and Preventative Medicine, Chief, Division of Behavioural Medicine, University of Buffalo presented at CHEO Grand Rounds in January 2018 "Leadfoot and worn brakes: Reinforecement Pathology and Obesity".

STUDENTS AND VOLU			
NAME	Role	PROJECT(S)	SUPERVISOR
Emma Avon	Student	Physical activity and the brain	Dr. Mark Tremblay Dr. Jeremy Walsh
David Burbidge	Volunteer	Sleep extension and neurocognition in adolescents	Dr. Jean-Philippe Chaput
Brandon Heidinger	Volunteer	Ramping up neurocognition (RUN): effects of physical activity on cognitive development in kindergarten children	Dr. Gary Goldfield
Connor O'Reilly	Volunteer	Effects of prenatal smoking on adiposity and metabolism in young children	Dr. Gary Goldfield
Robert Pap	Student	SMART2D	Dr. Jean-Philippe Chaput
Catherine Pouliot	Volunteer	Exercising with a screen or music and post-exercise energy compensation: a RCT in male adolescents	Dr. Jean-Philippe Chaput
Sean Selbie	Undergraduate Thesis	Ramping Up Neurocognition (RUN): Effects of physical activity on cognitive development in Kindergarten children	Dr. Gary Goldfield
Alex Taranowski	Volunteer	Effects of prenatal smoking on adiposity and metabolism in young children	Dr. Gary Goldfield
Elizabeth Thibault	Student	Can Play	Dr. Pat Longmuir
Evan Turner	Summer Research Student	Global Matrix 3.0 and SUNRISE projects	Dr. Mark Tremblay
Dipika Wadhera	Student	Sleep manipulation and learning memory consolidation in adolescents	Dr. Jean-Philippe Chaput
Veronica Zuccala	Summer Research Student	Active transportation and independent mobility in children	Dr. Mark Tremblay



HALO'S TRUE PRODUCTIVITY HALO BABIES 2018









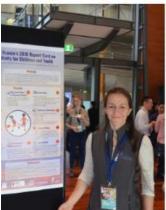
















ALO PHOTO GALLERY





Movement to Move Conference

Adelaide, Australia































2018 HALO HIGHLIGHTS

CANNABIS USE AMONG ADOLSCENTS IN ONTARIO

Principal Investigator: Dr. Jean-Philippe Chaput

Graduate student assigned to this project: Hugues Sampasa-Kanyinga

Background: Cannabis use can have serious detrimental effects in children and adolescents. It is therefore important to continually assess the use of cannabis among young people in order to inform prevention efforts. Given the legalization of recreational cannabis in Canada in 2018, it is crucial to gain more understanding on sociodemographic characteristics and behavioural factors associated with cannabis use among adolescents because (1) cannabis is the most commonly used illegal drug among youth in Canada, (2) such knowledge could constitute baseline data necessary for surveillance and evaluation of the effects of legalization on patterns of cannabis use and related factors and (3) adolescents are more vulnerable to the adverse effects of cannabis than adults.

Objective: To assess the prevalence of cannabis use among middle and high school students in Ontario and to examine the association with demographic and behavioural factors.

Methods: Data were obtained from the Ontario Student Drug Use and Health Survey, a province-wide school-based survey of students in grades 7 through 12. Analyses included a representative sample of 9920 middle and high school students. Bivariate cross-tabulations and logistic regression analyses were used to examine the factors associated with cannabis use.

Results: Overall, 21.5% and 13.9% of students reported using cannabis in the previous year and previous month, respectively. The conditional probability that an adolescent who reported cannabis use in the previous year would report daily use was 12.5%. There was a significant dose-response gradient with age, with older students being more likely to use cannabis than younger students. In multivariable analyses, being in grades 10 through 12 (odds ratios [ORs] ranged from 3.71 to 3.85), being black (OR: 2.67), using tobacco cigarettes (OR: 10.10) and being an occasional (OR: 5.35) or regular (OR: 14.6) alcohol user were associated with greater odds of cannabis use. Being an immigrant was associated with lower odds of cannabis use (OR: 0.55).

Conclusion: The findings suggest that cannabis use is prevalent among middle and high school students in Ontario and is strongly associated with tobacco cigarette smoking and alcohol consumption. Future research should document trends in cannabis use over time, including its risks, to determine the impact of recreational cannabis legalization in Canada.

Reference: Sampasa-Kanyinga H, Hamilton HA, LeBlanc AG, Chaput JP. Cannabis use among middle and high school students in Ontario: a school-based cross-sectional study. CMAJ Open 2018; 6: E50-E56.



RAMPING UP NEUROCOGNITION (RUN): THE IMPACT OF A TEACHER-LED ACTIVE PLAY INTERVENTION ON KINDERGARTEN CHILDREN'S COGNITIVE, SOCIAL AND EMOTIONAL DEVELOPMENT

Principal Investigator: Dr. Gary Goldfield

Co-Investigators: A. D'Angiulli, K. Adamo, P. Longmuir, K. Gunnell, P.J. Naylor, V. Temple, V. Carson, T. Okely. P. Tucker, B.

Timmons.

Funding Source: Social Sciences and Humanities Research Council (\$271,280)

Background: Only 15% of children aged 3-5 years meet the Canadian physical activity (PA) and sedentary behavior (SB) guidelines. This is alarming given PA and SB habits start young and track over time, and are associated with many health outcomes. Indeed, early childhood represents a critical period of brain development that lays the foundation for future cognitive growth and academic achievement. Our team has conducted several provider-teacher led interventions demonstrating increased PA and reduced SB in children aged 3-5 years, but very few intervention studies have examined neurocognitive outcomes in this population.

Primary Objective: To evaluate the feasibility and efficacy of a kindergarten-based and teacher-led PA (Ramping up neurocognition; RUN) intervention on children's neurocognitive development assessed by a composite score.

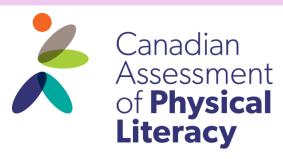
Secondary Objectives: To evaluate the efficacy of the RUN intervention on 1) Individual cognitive indicators such as cognitive flexibility, inhibitory control and attention, episodic memory, and receptive vocabulary; 2) social, emotional and academic development; and 3) To examine the association between changes in all neurocognitive and social-emotional functioning indicators, PA (duration and intensity), and SB to gain insight into which indicators best predict neurocognitive and social-emotional development in children. We predict that children in the RUN intervention will exhibit greater improvements in cognitive, social-emotional development, and PA, most notably time spent in moderate-to-vigorous PA will be the best predictor of all developmental indicators.

Design: This study uses a two-arm, cluster randomized controlled trial design. We plan to randomly assign 12 schools from the Ottawa Carleton District School Board of Eastern Ontario to either the RUN intervention delivered in Kindergarten classes (6 schools, n=120 children) or to the Control condition (6 schools, n=120 children) that will implement their standard Kindergarten curriculum. The 3-month intervention will include two, 3-hour training workshops to Kindergarten teachers along with bi-weekly booster sessions from a master trainer, and the RUN resource manual and training kit developed from our previous PA promotion trials in this population.

Measures/Data Analysis: Neurocognitive development will be assessed by the widely used National Institutes of Health (NIH) toolbox battery validated in children aged 3-6 years. This computer-administered battery consists of a composite score and individual scores measuring cognitive flexibility (Dimensional Change Card Sort Test), inhibitory control and attention (Flanker test), episodic memory (Picture Memory Sequence Tests), and receptive vocabulary (The Picture Vocabulary Test). PA (duration and intensity) and SB will be assessed over 1-week by accelerometry. Social-emotional development will be assessed by the teacher-rated Strengths and Difficulties Questionnaire (SDQ) and the Devereaux Students Strengths Assessment (DESSA). Adherence, fidelity, and attrition will be assessed using descriptive statistics, chisquare and t-tests. Changes between groups from baseline to 3-months in primary and secondary outcomes will be examined by linear mixed-effects model regression analyses.

Anticipated results and Impact on Child Health: This study will be among the first of RCTs to provide data on the feasibility and efficacy of a teacher-led intervention aimed at increasing PA and reducing SB to enhance neurocognitive and social-emotional development in early childhood. If efficacious, the data will inform a larger, clustered RCT designed to assess whether promoting PA is critical for establishing a trajectory for optimal cognitive, social and emotional health in young children. Such a trial would carry important public health implications for informing Kindergarten curricula during this critical period of brain development.

HALO ANNUAL REPORT 2018 33 CHEO – RESEARCH INSTITUTE



Canadian Évaluation Assessment canadienne of Physical du savoir-faire Literacy physique

The results from a large national research project led by HALO shows that about two-thirds of Canadian children have not achieved an acceptable level of physical literacy. Physical literacy is more than just fitness or motor skill; it includes the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life.

Fourteen published papers that looked at different aspects of physical literacy and the Canadian Assessment of Physical Literacy (CAPL) were published on October 2, 2018 as a special supplement in the journal BMC Public Health:

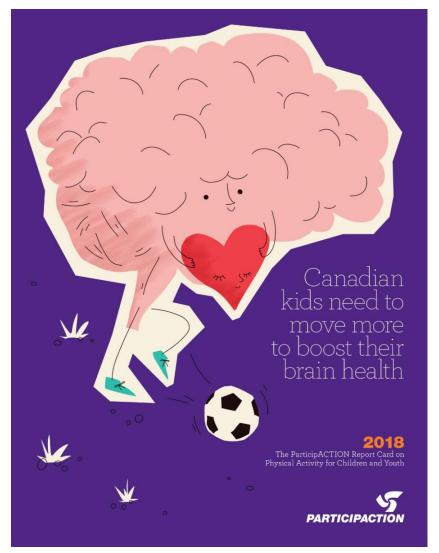
- Tremblay et al. Canada's Physical Literacy Consensus Statement: process and outcome. BMC Public Health. 2018;18(Suppl 2):1034.
- Longmuir et al. Physical literacy knowledge questionnaire: feasibility, validity, and reliability for Canadian children aged 8 to 12 years. BMC Public Health. 2018;18(Suppl 2):1035.
- Tremblay et al. Physical literacy levels of Canadian children aged 8-12 years: descriptive and normative results from the RBC Learn to Play-CAPL project. BMC Public Health. 2018;18(Suppl 2):1036.
- Saunders et al. The relationship between sedentary behaviour and physical literacy in Canadian children: a crosssectional analysis from the RBC-CAPL Learn to Play study. BMC Public Health. 2018;18(Suppl 2):1037.
- MacDonald et al. A cross-sectional study exploring the relationship between age, gender, and physical measures with adequacy in and prediletion for physical activity. BMC Public Health. 2018;18(Suppl 2):1038.
- Law et al. Associations between teacher training and measures of physical literacy among Canadian 8- to 12-year-old students. BMC Public Health. 2018;18(Suppl 2):1039.
- Dutil et al. Influence of the relative age effect on children's scores obtained from the Canadian Assessment of Physical Literacy. BMC Public Health. 2018;18(Suppl 2):1040.
- Lang et al. Cardiorespiratory fitness is associated with physical literacy in a large sample of Canadian children aged 8 to 12 years. BMC Public Health. 2018;18(Suppl 2):1041.
- Belanger et al. The relationship between physical literacy scores and adherence to Canadian physical activity and sedentary behaviour guidelines. BMC Public Health. 2018;18(Suppl 2):1042.
- Delisle Nyström et al. Associations between domains of physical literacy by weight status in 8- to 12-year-old Canadian children. BMC Public Health. 2018;18(Suppl 2):1043.
- Gunnell et al. Refining the Canadian Assessment of Physical Literacy based on theory and factor analyses. BMC Public Health. 2018;18(Suppl 2):1044.
- Gunnell et al. Revising the motivation and confidence domain of the Canadian Assessment of Physical Literacy. BMC Public Health. 2018;18(Suppl 2):1045.
- Delisle Nyström et al. An exploratory analysis of missing data from the Royal Bank of Canada (RBC) Learn to Play -Canadian Assessment of Physical Literacy (CAPL) project. BMC Public Health. 2018;18(Suppl 2):1046.
- Longmuir et al. Canadian Assessment of Physical Literacy Second Edition: a streamlined assessment of the capacity for physical activity among children 8 to 12 years of age. BMC Public Health. 2018;18(Suppl 2):1047.

More than 10,000 children, aged 8 to 12, from 11 cities across the country participated in the study from 2014 to 2017 through the CHEO Research Institute and research partners. The HALO Research Group has been developing and refining the CAPL for the past 10 years. It's a robust tool that is valid, reliable and feasible and is being used across the country and internationally. The results of this research provide the first comprehensive assessment of the physical literacy of Canadian children. Findings from this project have led to further refinements of the CAPL and the release of the second edition of this tool, or CAPL-2 (www.capl-eclp.ca), which is available in English, French and, most recently, in traditional/simplified Chinese. Visit bmcpublichealth.biomedcentral.com/articles/supplements/volume-18-supplement-2 to freely download the BMC Public Health special supplement.

More than 15 HALOites wrote content for the 2018 ParticipACTION Report Card that was released on June 19, 2018. The Report Card gave Canadian kids a D+ for Overall Physical Activity. Only 35 per cent of 5- to 17-year-olds and 62 per cent of 3- to 4-year-olds are getting the recommended physical activity levels for their age group.

The 2018 ParticipACTION Report Card was released in concert with an evidence-informed Expert Statement on Physical Activity and Brain Health in Children and Youth. The Expert Statement was developed by a team of pediatric neuroscientists, exercise scientists, clinicians and practitioners. It found that for better brain health – including cognition, brain function and mental health – all children and youth should be physically active on a regular basis.

The lowest grades in this year's Report Card were a D+ for Overall Physical Activity, D for Sedentary Behaviours and F for the 24-Hour Movement Behaviours. Despite common knowledge of the health benefits of kids moving more, turning away from screens, getting off the couch and breaking a sweat, most of them aren't, but now they have another pressing reason to do so – for their brain health.



Other grades assigned in the Report Card include:

- "D" for Active Play & Leisure Activities
- "D-" for Active Transportation
- "B" for Organized Sport Participation
- "C-" for Physical Education
- "B+" for Sleep
- "D+" for Physical Literacy
- "D" for Physical Fitness
- "C+" for Family & Peers
- "B-" for School
- "B+" for Community & Environment
- "C+" for Government

The 2018 Report Card garnered more than 750 media hits and nearly 200 million media impressions! To download the Report Card, including the Expert Statement, please visit www.participACTION.com/reportcard.

IMPACTING CHILD PHYSICAL AND MENTAL HEALTH OUTCOMES IN CONGENITAL HEART DISEASE: A RANDOMIZED CONTROLLED TRIAL OF ENHANCED PHYSICAL ACTIVITY SUPPORT IN CLINICAL CARE (PA TOOLKIT)

Principal Investigators: Dr. Pat Longmuir & Jennifer Graham (Canadian Congenital Heart Alliance)

Co-Investigators: Dr. Jane Lougheed¹, Dr. Kambiz Norozi³, Dr. Andrew Mackie², Betsy Rouble¹, Andrew Willan (Hospital for Sick Children)

Research Sites: ¹Children's Hospital of Eastern Ontario, ²Stollery Children's Hospital and ³London Health Sciences Centre Funding Source: Canadian Institutes of Health Research

Congenital Heart Disease (CHD) is the most common congenital condition affecting children in Canada, approximately 1 in every 100. 90% of children with CHD live 4 to 8 decades with a 3-5 times higher risk for atherosclerosis, anxiety or depression. Physical activity is known to decrease these important health risks. However, very few Canadian children are active enough for optimal health and, regardless of severity, CHD children are even less active. Children with CHD are thought to be inactive due to fear or uncertainty about physical activity. This study This study is evaluating enhanced physical activity support and resources as a part of clinical care in order to encourage and promote physical activity amongst this population.



Individualized kinesiology support can improve physical activity (PA) skill, confidence and participation among CHD children but exceeds current clinical care resources. In response, our team of patients, parents, and clinicians developed a "tool kit" of 12 child/family-friendly PA resources to enable clinicians to better address the most important PA issues for these patients. The resources are designed so that cardiac clinic personnel, nurses or cardiologists, can introduce and explain PA information to the patient and their family. We have also developed a searchable website of physical activity plans that children can do at home with their family and friends. A Registered Kinesiologist is also available for individualized physical activity counselling.

The purpose of this study is to evaluate the impact of enhanced physical activity resources on children (5 to 17 years) with moderate or severe CHD and their clinical care. Study participants will be given a pedometer that will measure the steps they take each day. They wear the pedometer for one week each month, for a total of six months. At the beginning and end of the study we measure their motivation for PA, their PA skills and their quality of life. Half of the children in the study are given the extra PA resources (12 PA tools, web site, Registered Kinesiologist) right away. The other half of the participants do not get the extra resources until after they finish the 6 months of study assessments. Comparing the data from the two groups of children evaluate whether PA counselling and resources can enhance PA capacity and participation among children living with CHD. We also evaluate the impact of the extra PA counselling on the healthcare/clinical system.

THE GLOBAL MATRIX 3.0 ON PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH

HALO director Mark Tremblay and a number of HALO researchers and students attended the Movement to Move Conference in Adelaide, Australia, on November 26th, for the release of the Global Matrix 3.0 on Physical Activity for Children and Youth. Report Cards evaluating 10 physical activity indicators were concurrently developed under the leadership of the Active Healthy Kids Global Alliance (AHKGA) following a harmonized process in 49 countries from 6 continents.



Report Card leaders after the release of the Global Matrix 3.0 at the Movement to Move Conference.

AHKGA is a not-for-profit organization that was established in 2014 following the success of the first Global Matrix, and was incorporated in Ottawa with Dr. Mark Tremblay as a president in 2018. The AHKGA website (www.activehealthykids.org) was relaunched by HALO on same day of the Global Matrix 3.0 release. It presents a comprehensive archive of the Report Card documents released around the world, news, and other Global Matrix related documents.

The Journal of Physical Activity and health published a free, open access, special issue (journals.humankinetics.com/toc/jpah/15/S2) including four peer-reviewed integrated articles presenting comparisons of the participating countries and 49 two page articles summarising findings from the national Report Cards on Physical Activity of Children and Youth.

A total of 490 grades, including 369 letter grades and 121 "incomplete (INC)" grades, were assigned by the 49 Report Card work groups. The key global findings of Global Matrix 3.0 are presented in the infographic posted here to the right. Please visit www.activehealthykids.org for more details.



Low levels of Physical Activity and high levels of Sedentary Behaviours are observed worldwide among children and youth.

- The average grade for Physical Activity is D, and the majority (75%)
- of countries have a failing grade (D or F)

 The average grade for Sedentary Behaviours is D+

Some countries are more successful at getting kids moving. What can we learn from them?



Slovenia obtained the best grades for Overall Physical Activity (A-). Family and Peers (B-) and Covernment (A), for an overall average of B. This seems to be the result of the collective support for physical activity from the government, the educational system, and the parents themselves.



In Zimbabwe, the grades were above average for Overall Physical Activity (C+) and Sedentary Behaviours (B). The physical activity of Zimbabwean children is mostly affected by Active Transportation, which, for the majority, is a necessary way of life.



Japan obtained the best grades for Active Transportation (A-) and Physical Fitness (A). Japan has an enforcement order stating that public schools should be located no more than 4-6 km from the student's home. This policy is very successful at promoting active transportation among children and youth.

Web Statistics

The current size of the HALO website (<u>www.haloresearch.ca</u>) is 1,533 web pages (10% above 2017). The statistics presented below are based on web activity across these web pages in the last year.

Overall Statistics

In 2018, there were approximately 7,000 unique visitors to <u>www.haloresearch.ca</u> every month (34% below 2017). These visitors viewed HALO web pages 233,300 times per month (4% below 2017). 278,100 items were sent from <u>www.haloresearch.ca</u> to web users (7% below 2017). Figure 3 shows overall statistics from 2011 to 2018.

Web Statistics

Average Monthly Total **Files** Web Pages **Visitors** Hits Visits ■ 2011 87,500 55,200 45,750 2,500 11,250 **2012** 135,000 87,100 58,900 17,700 3,500 **2013** 233,000 152,000 129,000 32,100 11,000 2014 255,700 160,700 146,500 31,000 9,100 **2015** 251,400 174,800 165,000 31,600 8,200 **2016** 388,600 337,600 194,000 54,000 9,300 ■ 2017 362,900 298,400 242,500 81,800 10,600 **2018** 7,000 388,300 278,100 233,300 59,000

Figure 3: Average Monthly Totals for Select Web Statistics for www.haloresearch.ca, 2011-18.

Dictionary for Figure 3

Hits: the total number of items on all web pages (e.g., images, audio clips) that are requested. For example, a web page with 3 graphics and some text will usually result in 4 hits when the web page is requested.

Files: the total number of hits (requests) that actually result in something being sent back to the user. This is useful since not all hits will send data.

Web Pages: the actual web pages requested and not all of the individual items that make up the web pages (e.g., images, audio clips).

Visits: the total number of websites making requests within a given timeout period (default is 30 minutes). Remote websites that link to images and other non-web page addresses are not counted.

Visitors: the total number of unique IP address that makes requests to www.haloresearch.ca.

Most Popular Web Pages

In 2018, the most popular web pages as measured by Google Analytics pageviews were:

- 1. Cost of formatting in scientific research (2785 views)
- 2. Position Statement on Active Outdoor Play (1162 views)
- 3. HALO grants (526 views)
- 4. HALO publications (496 views)
- 5. Canada's first "state of the nation" report on children's physical literacy (408 views)
- 6. <u>Director's message</u> (390 views)
- 7. HALO history (387 views)
- 8. The development of the Canadian 24 Hour Movement Behaviour Guidelines for Children and Youth (357 views)
- 9. Major initiatives related to childhood obesity and physical inactivity in Canada: 2014 year in review (340 views)
- 10. HALO publication garners global media coverage (298 views)

ACTIVE HEALTHY KIDS GLOBAL ALLIANCE WEBSITE



In August 2018, the Active Healthy Kids Global Alliance (AHKGA) incorporated as a not-for-profit organization in Canada. The Board of Directors includes 9 active members of the Alliance from all inhabited continents. AHKGA is a network of researchers, health professionals and stakeholders who are working together to advance physical activity in children and youth from around the world. AHKGA was established in 2014, following the success of the world's first Global Summit on the Physical Activity of Children in Toronto.

On November 27, 2018, the AHKGA website was re-launched with the release of the Global Matrix 3.0 in Adelaide, Australia and includes an interactive matrix of 490 physical activity grades from 49 countries (www.activehealthykids.org/global-matrix).



Sedentary Behaviour Research Network

The Sedentary Behaviour Research Network (SBRN) is the only organization for researchers and health professionals that focuses specifically on the health impact of sedentary behaviour. SBRN's mission is to connect sedentary behaviour researchers and health professionals working in all fields of study, and to disseminate this research to the academic community and to the public at large.

The Network has grown to include over 1650 members, including prominent researchers in the areas of physiology, epidemiology, psychology, and ergonomics. In October 2018, the Sedentary Behaviour Research Network disseminated a survey to determine member satisfaction, receive feedback on how to improve the SBRN website and membership communication, and explore initiatives for SBRN to focus on. Members provided a number of helpful responses. For example, when asked their level of satisfaction with SBRN, 50% of members reported being very satisfied, while 30% of members reported being somewhat satisfied. To improve the level of satisfaction, nearly one third of members suggested more active communication in the form of a monthly newsletter or regular emails to update members on opportunities to collaborate, sedentary behaviours related conferences, and ways to get involved in projects. An increase in network collaboration was also mentioned, suggesting SBRN offer a way for local researchers to connect. To view a summary of the survey, visit www.sedentarybehaviour.org/2019/01/17/sbrn-membership-survey-results.

The Healthy Active Living and Obesity Research Group created SBRN and launched the SBRN website in 2011 and actively maintains the website, its content, a rapidly expanding list-serve for sedentary behaviour researchers, and the world's largest online database of sedentary behaviour research. Approximately 7,400 unique visitors view the SBRN website every month.



STAFF AWARDS			
NAME	ORGANIZATION/AGENCY	GRANT/AWARD	
Joel Barnes	CHEO Research Institute	Outstanding Resesarch Coordinator	
Casey Gray	HALO	Spirit Award is given to a HALO staff or student who best exemplifies our vision, mission, and lines of business. This person embodies HALO's core values and is essential to the success and spirit of HALO	
Hélène Larocque	CHEO Research Institute	Spirit of the Research Institute	
Mark Tremblay	CSEP	Named Fellow of the Canadian Society for Exercise Physiology (F-CSEP) - one of eight inaugural recipients of the distinction	
Mark Tremblay	Canadian Coalition for Global Health Research	Vic Neufeld Mentorship Award in Global Health Research	
Mark Tremblay	Canadian Paediatric Society	Victor Marchessault Advocacy Award	
Mark Tremblay	Clarivate	Highly Cited Researchers 2018 (Top 1%)	
Mark Tremblay et al	Springer Nature Publishers	Change the World, One Article at a Time	



HALO Clinical Associate Scientist <u>Dr. Annick Buchholz</u> was awarded the 2018 Shining Star Award for Discovery and Learning at CHEO! This award recognizes an individual or team who encourages dynamic learning and discovery to improve the health of children, youth and families. The recipient always strives to expand their knowledge base, recognize the value of research, teach and transfer knowledge. The recipient seeks out and identifies opportunities for learning and discovery that result in positive outcomes.

POST-DOCTORAL FELLOW, STUDENT FUNDING, SCHOLARSHIPS AND AWARDS					
STUDENT NAME	ORGANIZATION/AGENCY	GRANT/AWARD			
Salomé Aubert	Mitacs	Accelerate Grant			
Angelica Blais	University of Ottawa	PhD Admission Graduate Scholarship			
Angelica Blais	Mitacs	Accelerate Grant			
Joel Blanchard	University of Ottawa	PhD Admission Graduate Scholarship			
Caroline Dutil	University of Ottawa	PhD Admission Graduate Scholarship			
Ryan Featherstone	Government of Ontario	Ontario Graduate Scholarship			
Ryan Featherstone	University of Ottawa	Excellence Scholarship			
Silvia González	University of Ottawa and Ontario Government	Ontario Trillium Scholarship			
Silvia González	University of Ottawa	School of Epidemiology Travel Award			
Michelle Guerrero	University of Windsor	Governor General's Gold Medal			
Jackie Lee	Ontario Ministry of Training, Colleges and Universities	Queen Elizabeth II Graduate Scholarship			
Jackie Lee	University of Ottawa	Excellence Scholarship			
Taru Manyanga	CIHR	Fellowship			
Taru Manyanga	University of Ottawa	School of Epidemiology Travel Award			
Taru Manyanga	University of Ottawa	Excellence Scholarship			
Taru Manyanga	University of Ottawa	Faculty of Medicine, Epidemiology Program, Award of Excellence			
Kevin Moncion	University of Ottawa	MSc Admission Graudate Scholarship			
Shikha Saxena	McGill University	Edith Strauss Knowledge Translation Grant			
Shikha Saxena	Inclusive Society, Quebec	Partnership Research Grant			
Jeremy Walsh	Michael Smith Foundation	Health Research Postdoctoral Award			
Jeremy Walsh	Physiological Society	Visiting Scholar Bursary			

HALO ANNUAL REPORT 2018 41 CHEO – RESEARCH INSTITUTE

SUMMARY OF RESEARCH FUNDING AND GRANTS

This table represents the grants for which HALO Investigators are assigned Principal Investigators or directly receive funding. This does not include all other projects that our investigators are involved with in the capacity of Co-Principal Investigators or Co-Investigators or participants.

investigators of co investigate	·		
NAME OF THE PI(S)	ORGANIZATION/AGENCY	TITLE OF PROJECT	AMOUNT (YEAR)
Chaput/King	Institute of Health and	Manipulating light	\$10,000
	Biomedical Innovation	wavelength to improve sleep	(2017-2018)
Chaput/Katz	Canadian Institutes of Health Research	Mobilizing the healthcare community towards an integrated approach to improving outcomes of patients with sleep disorders – Canadian Sleep and Circadian Network (CSCN)	\$200,000 (2015-2020)
Chaput	CHEO Research Institute (Research Growth Award)	Effects of increasing sleep duration on insulin sensitivity in adolescents having risk factors for type 2 diabetes	\$30,000 (2016-2018)
Chaput	Ministry of Research and Innovation (Early Researcher Awards program)	A good night's sleep to prevent type 2 diabetes in adolescents	\$150,000 (2016-2021)
Goldfield	Social Sciences & Humanities Research Council (SSHRC)	Ramping Up Neurcognition (RUN): the impact of a teacher-led active play intervention on kindergarten children's cognitive, social and emotional development	\$271,280 (2017-2022)
Goldfield	CHEO Research Institute and University of Ottawa	Effects of methylphenidate on weight loss and energy balance in obese youth	\$15,000 (2016-2018)
Goldfield	Shire Pharmaceuticals	The effects of dopamine- related genes no binge eating in women with binge- eating disorder: can a multilocus dopamine score predict treatment response?	\$30,280 (2017-2018)
Goldfield	Public Health Agency of Canada	Ramping Up Neurcognition (RUN): the impact of a teacher-led active play intervention on kindergarten children's cognitive, social and emotional development	\$36,000 (2018-2020)
Longmuir/Sawdon	Ontario Trillium Foundation	Physical activity in the lives of children with failing hearts	\$71,700 (2017-2018)
Longmuir	2018 Xinhua-uOttawa Joint Clinical Research Project Grant	The benefits of physical activity training for young children with cerebral palsy	149,750 RMB (2018)

HALO ANNUAL REPORT 2018 42 CHEO – RESEARCH INSTITUTE

NAME OF THE PI(S) Longmuir	ORGANIZATION/AGENCY Canadian Institutes of Health Research	TITLE OF PROJECT Impacting child physical and mental health outcomes in congenital heart disease: a randomized, controlled, multi-centre trial of enhanced physical activity support in clinical care to	AMOUNT (YEAR) \$424,575 (2017-2020)
Longmuir	Ontario Sport and Recreation Communities	decrease the burden of disease and treatment- related morbidity Access ON childhood physical literacy: assessing	\$253,205 (2017-2019)
	Fund	and supporting the physical literacy of Ontario children with medical conditions and disabilities	(2017-2013)
Longmuir	Ontario Ministry of Research and Innovation Early Researcher Award	LIFFE for cardiac kids through physical activity	\$150,000 (2017-2022)
Longmuir	Canadian Institutes of Health Research	New Investigator Salary Award	\$300,000 (2016-2021)
Longmuir/Graham	Ontario Sport and Recreation Communities Fund	Fearless physical activity: building physical literacy among Ontarians with congenital heart disease	\$186,934 (2016-2018)
Longmuir	Mitacs Accelerate Grant	Fearless Physical Activity	\$15,000 (2018)
Longmuir	Mitacs Accelerate Grant	I Can Play	\$15,000 (2018)
Longmuir	Human Resources Development Canada	Canada Summer Jobs Grant	\$3500 (2018)
Tremblay	Mitacs Accelerate Grant	From the ParticipACTION Physical Activity Report Card for Children and Youth and the Global Matrix 3.0: Evaluation and Strategic Harmonization	\$15,000 (2018)
Tremblay	The Lawson Foundation	Development of an assessment of the Forest and Nature School early childhood education and development program in Canada	\$50,000 (2018)
Tremblay	Public Health Agency of Canada (Healthy Living Fund)	Canadian 24-Hour Movement Guidelines for Children and Youth: Phase2 – integration and activation	\$1,165,000 (2016-2019)
Tremblay	CIHR Meeting Grant	International Surveillance Study of 24-Hour Movement Guidelines for the Early Years (SUNRISE)	\$20,000 (2018)

HALO ANNUAL REPORT 2018 43 CHEO – RESEARCH INSTITUTE

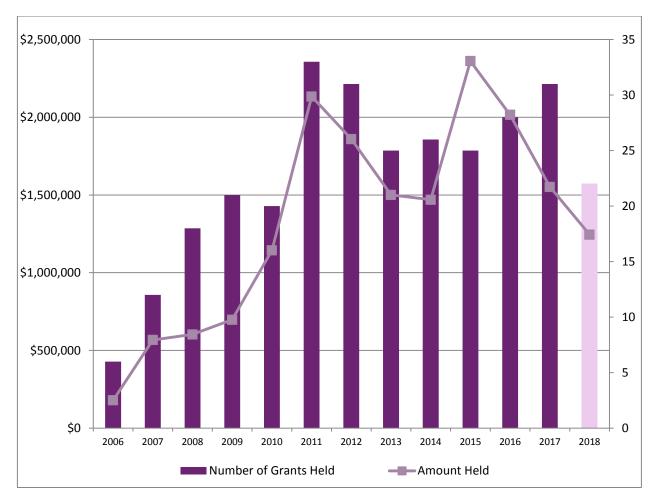


Figure 4: Number of grants held and amount of funds held as principal or co-principal investigator (attributed to 2018) by HALO Research Group and trends since 2007.

PEER-REVIEWED, REFEREED PUBLICATIONS

In recognition of all the great work done by all HALO students and staff (some of which may have occurred outside of HALO) this report includes all publications from 2018.

- 1. Aubert S, Barnes JD, Abdeta C, Abi Nader P, Adeniyi AF, Aguilar-Farias N, Andrade Tenesaca DS, Bhawra J, Brazo-Sayavera J, Cardon G, Chang C-K, Delisle Nyström C, Demetriou Y, Draper CE, Edwards L, Emeljanovas A, Gába A, Galaviz KI, González SA, Herrera-Cuenca M, Huang WY, Ibrahim IAE, Jürimäe J, Kämppi K, Katapally TR, Katewongsa P, Katzmarzyk PT, Khan A, Korcz A, Kim YS, Lambert E, Lee E-Y, Löf M, Loney T, López-Taylor J, Liu Y, Makaza D, Manyanga T, Mileva B, Morrison SA, Mota J, Nyawornota VK, Ocansey R, Reilly JJ, Roman-Viñas B, Silva DAS, Saonuam P, Scriven J, Seghers J, Schranz N, Skovgaard T, Smith M, Standage M, Starc G, Stratton G, Subedi N, Takken T, Tammelin T, Tanaka C, Thivel D, Tladi D, Tyler R, Uddin R, Williams A, Wong SHS, Wu C-L, Zembura P, Tremblay MS. Global Matrix 3.0 physical activity report card grades for children and youth: results and analysis from 49 countries. *Journal of Physical Activity and Health* 15(Suppl 2):S251-S273, 2018.
- 2. **Aubert S, Barnes JD**, Aguilar-Farias N, Cardon G, Chang CK, **Delisle Nyström C**, Demetriou Y, Edwards L, Emeljanovas A, Gába A, Huang WY, Ibrahim IAE, Jürimäe J, Katzmarzyk PT, Korcz A, Kim YS, **Lee EY**, Löf M, Loney T, Morrison SA, Mota J, Reilly JJ, Roman-Viñas B, Schranz N, Scriven J, Seghers J, Skovgaard T, Smith M, Standage M, Starc G, Stratton G, Takken T, Tammelin T, Tanaka C, Thivel D, Tyler R, Williams A, Wong SHS, Zembura P, **Tremblay MS**. Report Card grades on the physical activity of children and youth comparing 30 very high Human Development Index countries. *Journal of Physical Activity and Health* 15(Suppl 2):S298-S314, 2018.
- 3. **Belanger K, Barnes JD, Longmuir PE**, Anderson KD, Bruner B, Copeland JL, Gregg MJ, Hall N, Kolen AM, Lane KN, Law B MacDonald DJ, Martin LJ, Saunders TJ, Sheehan D, Stone M, Woodruff SJ, **Tremblay MS**. The relationship between physical literacy scores and adherence to Canadian physical activity and sedentary behaviour guidelines. *BMC Public Health* 18(Suppl 2):1042, 2018.
- 4. Berry TR, Rhodes RE, Ori EM, McFadden K, Faulkner G, Latimer-Cheung AE, O'Reilly N, Spence JC, Tremblay MS, Vanderloo LM. The short-term effects of a mass reach physical activity campaign: An evaluation using hierarchy of effects model and intention profiles. *BMC Public Health* 18:1300, 2018.
- 5. Bonafiglia J, Nelms M, Preobrazenski N, LeBlanc C, Robins L, Lu S, Lithopoulos A, **Walsh J**, Gurd B. Individual statistics for individual responses: Moving beyond threshold-based dichotomous classification to improve the accuracy in classifying non-responders. *Physiological Reports* 6(22):1-11, 2018.
- 6. Borghese MM, Lin Y, **Chaput JP**, Janssen I. Estimating sleep efficiency in 10- to 13-year-olds using a waist-worn accelerometer. *Sleep Health* 4:110-115, 2018.
- 7. Brunet J, O'Loughlin JL, **Gunnell KE**, Sabiston CM. Concurrent and reciprocal predictive relationships between depressive symptoms and physical activity in breast cancer survivors. *Health Psychology* 37:14-23, 2018.
- 8. Bryant EJ, Thivel D, **Chaput JP**, Drapeau V, Blundell JE, King NE. Development and validation of the Child Three-Factor Eating Questionnaire (CTFEQr17). *Public Health Nutrition* 21:2558-2567, 2018.
- 9. **Cameron JD**, Tasca GA, Little J, Chyrulia L, Ritchie K, Yeh E, Doucette S, Obregon AM, Bulman DE, Doucet E, **Goldfield GS.** Effects of fat mass and obesity-associated (FTO) gene polymorphisms on binge eating in women with binge-eating disorder: The moderating influence of attachment style. *Nutrition* 61:208-212, 2018.
- 10. **Cameron JD**, Doucet É, **Adamo KB**, Walker M, Tirelli A, **Barnes JD**, **Hafizi K**, **Murray M**, **Goldfield GS**. Effects of prenatal exposure to cigarettes on anthropometrics, energy intake, energy expenditure, and screen time in children. *Physiology & Behavior* 194:394-400, 2018.
- 11. **Chaput JP, Tremblay MS**, Katzmarzyk PT, Fogelholm M, Mikkilä V, Hu G, Lambert EV, Maher C, Maia J, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, LeBlanc AG. Outdoor time and dietary patterns in children around the world. *Journal of Public Health* 40:e493-e501, 2018.

HALO ANNUAL REPORT 2018 45 CHEO – RESEARCH INSTITUTE

- 12. **Chaput JP,** Yau J, Rao DP, Morin CM. Prevalence of insomnia for Canadians aged 6 to 79. *Health Reports* 29:16-20, 2018.
- 13. **Chaput JP, Dutil C, Sampasa-Kanyinga H.** Sleeping hours: what is the ideal number and how does age impact this? *Nature and Science of Sleep* 10:421-430, 2018.
- 14. **Chaput JP**, **Tremblay MS**, Katzmarzyk PT, Fogelholm M, Hu G, Maher C, Maia J, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, **Sampasa-Kanyinga H**. Sleep patterns and sugar-sweetened beverage consumption among children from around the world. *Public Health Nutrition* 21:2385-2393, 2018.
- 15. **Chaput JP**, **Barnes JD**, **Tremblay MS**, Fogelholm M, Hu G, Lambert EV, Maher C, Maia J, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, Katzmarzyk PT. Thresholds of physical activity associated with obesity by level of sedentary behaviour in children. *Pediatric Obesity* 13:450-457, 2018.
- 16. **Chaput JP**, **Barnes JD**, **Tremblay MS**, Fogelholm M, Hu G, Lambert EV, Maher C, Maia J, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, Katzmarzyk PT. Inequality in physical activity, sedentary behaviour, sleep duration and risk of obesity in children: a 12-country study. *Obesity Science and Practice* 4:229-237, 2018.
- 17. Chang VC, **Chaput JP**, Roberts KC, Jayaraman G, Do MT. Factors associated with sleep duration across life stages: results from the Canadian Health Measures Survey. *Health Promotion and Chronic Disease Prevention in Canada* 38:404-418, 2018.
- 18. Cinar E, **Saxena S**, Uygur F. Combination therapy versus exercise and orthotic support in the management of pain in plantar fasciitis: a randomized controlled trial. *Foot & Ankle International 39*(4):406-414, 2018.
- 19. Cinar E, **Saxena S**, UygurF. Low-level laser therapy in the management of plantar fasciitis: a randomized controlled trial. *Lasers in Medical Science* 33(5):949-958, 2018.
- 20. Curtin K, Lee E-Y, Yun L, Spence J C. Context matters: Examining perceived health and fitness outcomes of physical activity participation for South Korean adults and youth. *International Journal of Behavioral Medicine 25*(5):548-557, 2018.
- 21. Davenport MH, McCurdy A, Mottola MF, Skow R, Meah VL, Poitras VJ, Garcia AJ, **Gray CE**, Barrowman N, Riske L, Sobierajski F, James M, Nagpal T, Marchand AA, Nuspl M, Slater LG, Barakat R, **Adamo KB**, Davies GA, Ruchat SM. The impact of pre-natal exercise on both pre-natal and post-natal anxiety and depressive symptoms: a systematic review and meta-analysis. *British Journal of Sports Medicine* 52(21):1376-1385, 2018.
- 22. Davenport MH, Meah VL, Ruchat SM, Davies GA, Skow R, Barrowman N, **Adamo KB**, Poitras VJ, **Gray CE**, Garcia AJ, Sobierajski F, Riske L, James M, Kathol AJ, Nuspl M, Marchand AA, Nagpal TS, Slater LG, Weeks A, Barakat R, Mottola MF. The impact of prenatal exercise on neonatal and childhood outcomes: a systematic review and meta-analysis. *British Journal of Sports Medicine* 52(21):1386-1396, 2018.
- 23. Davenport MH, Nagpal T, Mottola MF, Skow R, Riske L, Poitras VJ, Garcia AJ, **Gray CE**, Barrowman N, Meah VL, Sobierajski F, James M, Nuspl M, Weeks A, Marchand AA, Slater LG, **Adamo KB**, Davies GA, Barakat R, Ruchat SM. Prenatal exercise (including but not limited to pelvic floor muscle training) on and urinary incontinence during and following pregnancy: A systematic review and meta-analysis. *British Journal of Sports Medicine* 52(21):1397-1404, 2018.
- 24. Davenport MH, Ruchat SM, Poitras VJ, Garcia AJ, **Gray CE**, Barrowman N, Skow R, Meah VL, Riske L, Sobierajski F, James M, Kathol AJ, Nuspl M, Marchand AA, Nagpal TS, Slater LG, Weeks A, **Adamo KB**, Davies GA, Barakat R, Mottola MF. Prenatal exercise for the prevention of gestational diabetes mellitus and hypertensive disorders of pregnancy: a systematic review and meta-analysis. *British Journal of Sports Medicine* 52(21):1367-1375, 2018.

HALO ANNUAL REPORT 2018 46 CHEO – RESEARCH INSTITUTE

- 25. Davenport MH, Sobierajski F, Mottola MF, Skow R, Meah VL, Poitras VJ, **Gray CE**, Garcia AJ, Barrowman N, Riske L, James M, Nagpal TS, Marchand AA, Slater LG, **Adamo KB**, Davies GA, Barakat R, Ruchat SM. Glucose responses to acute and chronic exercise during pregnancy: a systematic review and meta-analysis *British Journal of Sports Medicine* 52(21):1357-1366, 2018.
- 26. **Delisle Nyström C**, Traversy G, **Barnes JD**, **Chaput JP**, **Longmuir PE**, **Tremblay MS**. Associations between domains of physical literacy by weight status in 8- to 12-year-old Canadian children. *BMC Public Health* 18(Suppl. 2):1043, 2018.
- 27. **Delisle Nyström C**, **Barnes JD**, **Tremblay MS**. An exploratory analysis of missing data from the Royal Bank of Canada (RBC) Learn to Play Canadian Assessment of Physical Literacy (CAPL) project. *BMC Public Health* 18(Suppl 2):1046, 2018.
- 28. **Delisle Nyström C**, Larsson C, Alexandrou C, Ehrenblad B, Eriksson U, Friberg M, Hagströmer M, Lindroos AK, Nyberg G, Löf M. Results from Sweden's 2018 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health* 15(S2): S413-S414, 2018.
- 29. **Delisle Nyström C**, Söderström E, Henriksson P, Henriksson H, Poortvliet E, Löf M. The paediatric option for BodPod to assess body composition in preschool children: what fat-free mass density values should be used? *British Journal of Nutrition* 120(7):797-802, 2018.
- 30. **Delisle Nyström C**, Sandin S, Henriksson P, Henriksson H, Maddison R, Löf M. A 12-month follow-up of a mobile-based (mHealth) obesity prevention intervention in pre-school children: the MINISTOP randomized controlled trial. *BMC Public Health* 18(1):658, 2018.
- 31. Doja A, Bookwala A, Pohl D, Rossi-Ricci A, Barrowman N, Chan J, **Longmuir PE**. Relationship between physical activity, tic severity and quality of life in children and adolescents with Tourette syndrome. *Journal of the Canadian Academy of Child and Adolescent Psychiatry* 27(4):222-227, 2018.
- 32. Donahoe K, MacDonald DJ, **Tremblay MS**, Saunders TJ. Validation of PiezoRx pedometer-derived sedentary time. *International Journal of Exercise Science* 11(7):552-560, 2018.
- 33. Dumuid D, Stanford TE, Martin-Fernandez JA, Pedisic Z, Maher CA, Lewis LK, Hron K, Katzmarzyk PT, **Chaput JP**, Fogelholm M, Hu G, Lambert EV, Maia J, Sarmiento OL, Standage M, Barreira TV, Broyles ST, Tudor-Locke C, **Tremblay MS**, Olds T. Compositional data analysis for physical activity, sedentary time and sleep research. *Statistical Methods in Medical Research* 27:3726-3738, 2018.
- 34. Dumuid D, Maher C, Lewis LK, Stanford TE, Martin-Fernandez JA, Ratcliffe J, Katzmarzyk PT, Barreira TV, **Chaput JP**, Fogelholm M, Hu G, Maia J, Sarmiento OL, Standage M, **Tremblay MS**, Tudor-Locke C, Olds T. Human development index, children's health-related quality of life and movement behaviors: a compositional data analysis. *Quality of Life Research* 27:1473-1482, 2018.
- 35. Dumuid D, Stanford TE, Pedišić Ž, Maher C, Lewis LK, Martín Fernández JA, Maher C, Katzmarzyk PT, **Chaput JP**, Fogelholm M, Standage M, **Tremblay MS**, Olds T. Adiposity and the isotemporal substitution of physical activity, sedentary time and sleep among school-aged children: a compositional data analysis approach. *BMC Public Health* 18:311, 2018.
- 36. Dumuid D, Olds T, Lewis LK, Martin-Fernandez JA, Barreira T, Broyles S, **Chaput JP**, Fogelholm M, Hu G, Kuriyan R, Kurpad A, Lambert EV, Maia J, Matsudo V, Onywera VO, Sarmiento OL, Standage M, **Tremblay MS**, Tudor-Locke C, Zhao P, Katzmarzyk PT, Gillison F, Maher C; for the ISCOLE research group. The adiposity of children is associated with their lifestyle behaviours: a cluster analysis of school-aged children from 12 nations. *Pediatric Obesity* 13:111-119, 2018.
- 37. **Dutil C, Walsh JJ, Featherstone RB, Gunnell KE, Tremblay MS,** Gruber R, Weiss SK, Cote KA, **Sampson M, Chaput JP**. Influence of sleep on developing brain functions and structures in children and adolescents: A systematic review. *Sleep Medicine Reviews* 42:184-201, 2018.

HALO ANNUAL REPORT 2018 47 CHEO – RESEARCH INSTITUTE

- 38. **Dutil C, Tremblay MS, Longmuir PE, Barnes JD, Belanger K, Chaput JP**. Influence of the relative age effect on children's scores obtained from the Canadian assessment of physical literacy. *BMC Public Health* 18(Suppl. 2):1040, 2018.
- 39. Ek A, Alexandrou C, **Delisle Nyström C**, Direito A, Eriksson U, Hammar U, Henriksson P, Maddison R, Trolle Lagerros Y, Löf M. The Smart City Active Mobile Phone Intervention (SCAMPI) study to promote physical activity through active transportation in healthy adults: a study protocol for a randomised controlled trial. *BMC Public Health* 18(1):880, 2018.
- 40. Faulkner G, Bassett-Gunter R, White L, Berry TR, **Tremblay MS**. Can The Moblees move Canadian children? Investigating the impact of a television program on children's physical activity. *Frontiers in Public Health* 6:206, 2018.
- 41. Faulkner G, Yun L, **Tremblay MS**, Spence JC. Exploring the impact of the 'new' ParticipACTION: Overview and introduction of the special issue. *Health Promotion and Chronic Disease Prevention in Canada* 38(4):153-161, 2018.
- 42. Faulkner G, Ramanathan S, Plotnikoff RC, Berry T, Deshpande S, **Latimer-Cheung AE**, Rhodes RE, **Tremblay MS**, Spence JC. ParticipACTION after 5 years of re-launch: A quantitative survey of Canadian organizational awareness and capacity regarding physical activity initiatives. *Health Promotion and Chronic Disease Prevention in Canada* 38(4):162-169, 2018.
- 43. Fournier A, Loiselle C, Chamberlain J, **Longmuir PE**. Video evaluation of an exercise intervention in preschool aged children with developmental delays: Tumbling Together to improve self-regulation skills. *Exercise Medicine* 2:11, 2018.
- 44. **Goldfield GS**, Kenny GP, Prud'homme D, Holcik M, Alberga AS, Fahnstock M, **Cameron JD**, Doucette S, **Hadjiyannakis S**, Tulloch H, **Tremblay MS**, **Walsh J**, Guerin E, **Gunnell KE**, D'Angiulli A, Sigal RJ. Effects of aerobic training, resistance training, or both on brain-derived neurotrophic factor in adolescents with obesity: the HEARTY randomized controlled trial. *Physiology and Behavior* 191:138-145, 2018.
- 45. **González SA**, **Barnes JD**, Abi Nader P, Andrade Tenesaca DS, Brazo-Sayavera J, Galaviz KI, Herrera-Cuenca M, Katewongsa P, López-Taylor J, Liu Y, Mileva B, Ochoa Avilés AM, **Silva DAS**, Saonuam P, **Tremblay MS**. Report card grades on the physical activity of children and youth from 10 countries with high Human Development Index Global Matrix 3.0. *Journal of Physical Activity and Health* 15(Suppl 2):S284-S297, 2018.
- 46. **Gunnell KE, Longmuir PE, Barnes JD, Belanger K, Tremblay MS**. Refining the Canadian Assessment of Physical Literacy based on theory and factor analyses. *BMC Public Health* 18(Suppl 2):1044, 2018.
- 47. **Gunnell KE, Longmuir PE**, Woodruff SJ, **Barnes JD**, **Belanger K**, **Tremblay MS**. Revising the motivation and confidence domain of the Canadian Assessment of Physical Literacy. *BMC Public Health* 18(Suppl 2):1045, 2018.
- 48. **Gunnell KE**, Brunet J, Bélanger M. Out with the old, in with the new: Assessing change in screen time when measurement changes over time. *Preventive Medicine Reports* 9: 37-41, 2018
- 49. Gutiérrez-Martínez L, Martínez RG, **González SA**, Bolívar MA, Estupiñan OV, Sarmiento OL. Effects of a strategy for the promotion of physical activity in students from Bogotá. *Rev Saude Publica 52:79,* 2018.
- 50. Johnson C, **Chaput JP**, Rioux F, Diasparra M, Richard C, Dubois L. An exploration of reported food intake among inmates who gained body weight during incarceration in Canadian federal penitentiaries. *PLOS ONE* 13:e0208768, 2018.
- 51. Johnson C, **Chaput JP**, Diasparra M, Richard C, Dubois L. Canadian federal penitentiaries as obesogenic environments: a retrospective cohort study. *CMAJ Open* 6:E347-352, 2018.
- 52. Kang DW, **Lee E-Y**, An K, Min JH, Jeon JY, Courneya KS. Associations between physical activity, metabolic risk factors, and comorbidities in cancer survivors. *Journal of Cancer Survivorship* 12(4):441-449, 2018.

HALO ANNUAL REPORT 2018 48 CHEO – RESEARCH INSTITUTE

- 53. Katzmarzyk P, Broyles ST, **Chaput JP**, Fogelholm M, Hu G, Lambert EV, Maher C, Maia J, Olds T, Onywera V, Sarmiento OL, Standage M, **Tremblay MS**, Tudor-Locke C. Sources of variability in childhood obesity indicators and related behaviors. *International Journal of Obesity* 42:108-110, 2018.
- 54. Killham ME, Mosewich AE, Mack DE, **Gunnell KE**, Ferguson LJ. Self-compassion and women athletes' sport performance. *Sport, Exercise and Performance Psychology* 7:297-307, 2018.
- 55. Lang JL, Chaput JP, Longmuir PE, Barnes JD, Belanger K, Tomkinson GR, Anderson KD, Bruner B, Copeland JL, Gregg MJ, Hall N, Kolen AM, Lane KN, Law B, MacDonald DJ, Martin LJ, Saunders TJ, Sheehan D, Stone MR, Woodruff SJ, Tremblay MS. Cardiorespiratory fitness is associated with physical literacy in a large sample of Canadian children aged 8 to 12 years. *BMC Public Health* 18(Suppl. 2):1041, 2018.
- 56. **Lang JJ**, Wolfe Phillips E, Orpana HM, **Tremblay MS**, Ross R, Ortega FB, **Silva DAS**, Tomkinson GR. Field-based measurement of cardiorespiratory fitness to evaluate physical activity interventions. *Bulletin of the World Health Organization* 96:794-796, 2018.
- 57. **Lang JJ**, Tomkinson GR, Janssen I, Ruiz JR, Ortega FB, Léger L, **Tremblay MS**. Making a case for cardiorespiratory fitness surveillance among children and youth. *Exercise and Sport Sciences Reviews* 46(2):66-75, 2018.
- 58. **Lang JJ, Belanger K**, Poitras V, Janssen I, Tomkinson GR, **Tremblay MS**. Systematic review of the relationship between 20 m shuttle run performance and health indicators among children and youth. *Journal of Science and Medicine in Sport* 21:383-397, 2018.
- 59. **Lang JJ**, **Tremblay MS**, Leger L, Olds T, Tomkinson GR. International variability in 20 m shuttle run performance in children and youth: who are the fittest from a 50-country comparison? A systematic literature review with pooling of aggregate results. *British Journal of Sports Medicine* 52:276, 2018.
- 60. Law B, Bruner B, Scharoun Benson SM, Anderson K, Gregg M, Hall N, Lane K, MacDonald DJ, Saunders TJ, Sheehan D, Stone MR, Woodruff SJ, Belanger K, Barnes JD, Longmuir PE, Tremblay MS. Associations between teacher training and measures of physical literacy among Canadian 8- to 12-year-old students. BMC Public Health 18(Suppl 2):1039, 2018.
- 61. LeBlanc AG, **Chaput JP**. The relationship between occupational standing and sitting and incident heart disease over a 12-year period in Ontario, Canada. *American Journal of Epidemiology* 187:398-401, 2018.
- 62. Lee J, Sa J, **Chaput JP**, Seo DC, Samuel T. Racial/ethnic differences in body weight perception among U.S. college students. *Journal of American College Health* 66:429-437, 2018.
- 63. **Lee J,** Alpous A, Yusuf W, Cardarelli S, Rhodenizer T, Shaw-Swettenham K, Adams R, **Longmuir PE**. Y Kids Academy program increases knowledge of healthy living in young adolescents. *Exercise Medicine* 2:10, 2018.
- 64. **Lee EY**, Spence JC, **Tremblay MS**, **Carson V**. Meeting 24-Hour Movement Guidelines for Children and Youth and associations with psychological well-being among South Korean adolescents. *Mental Health and Physical Activity* 14:66-73, 2018.
- 65. **Lee E-Y**, Yun L, Lim H, Kang DW, Yi KJ. Promoting equity and social inclusion in sport and physical activity: Gender-safe approaches [In Korean]. *Journal of Sports and Leisure Studies* 71:513-523, 2018.
- 66. **Lee E-Y**, Hesketh KD, Rhodes, RE, Rinaldi CM, Spence JC, **Carson V**. Role of parental and environmental characteristics in toddlers' physical activity and screen time: Bayesian analysis of structural equation models. *International Journal of Behavioural Nutrition and Physical Activity 15:*17, 2018.
- 67. **Lee E-Y, Carson V.** Physical activity, sedentary behaviour, and psychosocial well-being among young South Korean children. *Child: Care, Health and Development 44*(1):108-116, 2018.

HALO ANNUAL REPORT 2018 49 CHEO – RESEARCH INSTITUTE

- 68. Lin Y, **Tremblay MS**, Katzmarzyk PT, Fogelholm M, Hu G, Lambert EV, Maher C, Maia J, Olds T, Sarmiento OL, Standage M, Tudor-Locke C, **Chaput JP**. Temporal and bi-directional associations between sleep duration and physical activity/sedentary time in children: An international comparison. *Preventive Medicine* 111:436-441, 2018.
- 69. Lithopoulos A, Dacin PA, Berry TR, Faulkner G, O'Reilly N, Rhodes RE, Spence JC, **Tremblay MS**, Vanderloo LM, **Latimer-Cheung AE**. Examining the ParticipACTION brand using the brand equity pyramid. *Journal of Social Marketing* 8(4):378-396, 2018.
- 70. **Livock H, Barnes JD**, Pouliot C, LeBlanc AG, Saunders TJ, **Tremblay MS**, Prud'homme D, **Chaput JP**. Watching television or listening to music while exercising failed to affect post-exercise food intake or energy expenditure in male adolescents. *Appetite* 127:266-273, 2018.
- 71. **Longmuir PE**, Woodruff SJ, Boyer C, Lloyd M, **Tremblay MS**. Physical Literacy Knowledge Questionnaire: feasibility, validity, and reliability for Canadian children aged 8 to 12 years. *BMC Public Health* 18(Suppl 2):1035, 2018.
- 72. **Longmuir PE, Gunnell KE, Barnes JD, Belanger K, Leduc G, Woodruff SJ, Tremblay MS.** Canadian Assessment of Physical Literacy Second Edition: a streamlined assessment of the capacity for physical activity among children 8 to 12 years of age. *BMC Public Health* 18(Suppl 2):1047, 2018.
- 73. **Longmuir PE**, **Sampson M**, Ham J, Weekes M, Patel BJ, Gow RM. The mental health of adolescents and preadolescents living with inherited arrhythmia syndromes: A systematic review of the literature. *Cardiology in the Young* 28(5):621-631, 2018.
- 74. MacDonald DJ, Saunders TJ, **Longmuir PE**, **Barnes JD**, **Belanger K**, Bruner B, Copeland JL, Gregg MJ, Hall N, Kolen AM, Law B, Martin LJ, Sheehan D, Woodruff SJ, **Tremblay MS**. A cross sectional study exploring the relationship between age, gender, and physical measures with adequacy in and predilection for physical activity. *BMC Public Health* 18(Suppl 2):1038, 2018.
- 75. McGregor DE, **Carson V**, Palarea-Albaladejo J, Dall PM, **Tremblay MS**, Chastin SFM. Compositional analysis of the associations between 24-hour movement behaviors and health indicators among adults and older adults from the Canadian Health Measures Survey. *International Journal of Environmental Research and Public Health* 15:1779, 2018.
- 76. **Manyanga T, Barnes JD, Tremblay MS**, Katzmarzyk PT, Broyles ST, Barreira TV, Fogelholm M, Hu G, Maher C, Maia J, Olds T, Sarmiento OL, Standage M, Tudor-Locke C, **Chaput JP**. No evidence for an epidemiological transition in sleep patterns among children: a 12-country study. *Sleep Health* 4:87-95, 2018.
- 77. **Manyanga T, Barnes JD**, Abdeta C, Adeniy AF, Bhawra J, Draper CE, Katapally TR, Khan A, Lambert E, Makaza D, Nyawornota VK, Ocansey R, Subedi N, Uddin R, Tladi D, **Tremblay MS**. Indicators of physical activity among children and youth in nine countries with low to medium Human Development Indices: A Global Matrix 3.0 paper. *Journal of Physical Activity and Health* 15(Suppl 2):S274-S283, 2018.
- 78. Morrison KM, Ball GDC, Ho J, Mackie P, **Buchholz A**, Chanoine JP, Hamilton J, AM, Laberge, Legault L, Thabane L, **Tremblay M**, Zenlea I. The CANadian Pediatric Weight management Registry (CANPWR): lessons learned from developing and initiating a national, multi-centre study embedded in pediatric clinical practice. *BMC Pediatrics* 18:237, 2018.
- 79. Myers ND, Ntoumanis N, **Gunnell KE**, Gucciardi DF, Lee, S. A review of some emergent quantitative analyses in sport and exercise psychology. *International Review of Sport and Exercise Psychology* 11:70-100, 2018.
- 80. Obeid N, Norris ML, **Buchholz A**, Henderson KA, **Goldfield GS**, Bedford S, Flament MF. Socioemotional predictors of body esteem in adolescent males. *Psychology of Men & Masculinity* 19(3):439-445, 2018.
- 81. Obregon Rivas AM, Santos JL, Valladares MS, **Cameron J**, **Goldfield GS**. Association of the FTO fat mass and obesity-associated gene rs9939609 polymorphism with rewarding value of food and eating behavior in Chilean children. *Nutrition* 54:105-110, 2018.

HALO ANNUAL REPORT 2018 50 CHEO – RESEARCH INSTITUTE

- 82. Okely AD, **Tremblay MS**, Reilly JJ, Draper CE, Bull F. Physical activity, sedentary behaviour, and sleep: movement behaviours in early life. *Lancet Child & Adolescent Health* 2:233-235, 2018.
- 83. Onywera VO, Larouche R, Oyeyemi AL, Prista A, Akinroye KK, Heyker S, Owino GE, Tremblay MS. Development and convergent validity of new self-administered questionnaires of active transportation in three African countries: Kenya, Mozambique and Nigeria. *BMC Public Health* 18:1018, 2018.
- 84. Ramanathan S, Faulkner G, Berry T, Deshpande S, Latimer-Cheung AE, Rhodes RE, Spence JC, Tremblay MS. Perceptions of organizational capacity to promote physical activity in Canada and ParticipACTION's impact five years after its re-launch: A qualitative study. *Health Promotion and Chronic Disease Prevention in Canada* 38(4):170-178, 2018.
- 85. Rivière F, **Aubert S**, Omorou AY, Ainsworth BE, Vuillemin A. Taxonomy-based content analysis of sedentary behaviour questionnaires: A systematic review. *PLOS ONE*, 13(3):e0193812, 2018.
- 86. Ruchat SM, Mottola MF, Skow R, Nagpal TS, Meah VL, James M, Riske L, Sobierajski F, Kathol AJ, Marchand AA, Nuspl M, Weeks A, **Gray CE**, Poitras VJ, Jaramillo A, Barrowman N, Slater LG, **Adamo KB**, Davies GA, Barakat R, Davenport MH. Effectiveness of exercise interventions in the prevention of excessive gestational weight gain and postpartum weight retention: A systematic review and meta-analysis. *British Journal of Sports Medicine* 52(21):1347-1356, 2018.
- 87. **Sampasa-Kanyinga H, Chaput JP**, Hamilton HA, Colman I. Bullying involvement, psychological distress, and short sleep duration among adolescents. *Social Psychiatry and Psychiatric Epidemiology* 53:1371-1380, 2018.
- 88. **Sampasa-Kanyinga H**, Hamilton HA, **Chaput JP**. Use of social media is associated with short sleep duration in a doseresponse manner in students aged 11 to 20 years. *Acta Paediatrica* 107:694-700, 2018.
- 89. **Sampasa-Kanyinga H**, Hamilton HA, **Chaput JP.** Sleep duration and consumption of sugar-sweetened beverages and energy drinks among adolescents. *Nutrition* 48:77-81, 2018.
- 90. **Sampasa-Kanyinga H**, Hamilton HA, LeBlanc AG, **Chaput JP**. Cannabis use among middle and high school students in Ontario: a school-based cross-sectional study. *CMAJ Open* 6:E50-E56, 2018.
- 91. Saunders TJ, McDonald DJ, Copeland JL, **Longmuir PE**, **Barnes JD**, **Belanger K**, Bruner B, Gregg MJ, Hall N, Kolen AM, Law B, Martin LJ, Sheehan D, Stone MR, Woodruff SJ, **Tremblay MS**. The relationship between sedentary behaviour and physical literacy in Canadian children: a cross-sectional analysis from the RBC CAPL Learn to Play study. *BMC Public Health* 18(Suppl 2):1037, 2018.
- 92. **Silva DAS, Chaput JP**, Katzmarzyk PT, Fogelholm M, Hu G, Maher C, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, **Tremblay MS**. Physical education classes, physical activity, and sedentary behavior in children. *Medicine and Science in Sports and Exercise* 50:995-1004, 2018.
- 93. **Silva DAS, Tremblay MS**. It's time to take care of Brazilian children and adolescents. *Revista Brasileira de Cineantropometria & Desempenho Humano* 20(4):363-366, 2018.
- 94. **Silva DAS**, **Lang JJ**, **Barnes JD**, Tomkinson GR, **Tremblay MS**. Cardiorespiratory fitness in children: evidence for criterion-referenced cut-points. *PLOS ONE* 13(8):e0201048, 2018.
- 95. **Silva DAS**, **Tremblay MS**, de Souza MFM, Guerra MR, Mooney M, Naghavi M, Malta DC. Mortality and years of life lost due to breast cancer attributable to physical inactivity in the Brazilian female population (1990-2015). *Scientific Reports* 8:11141, 2018.
- 96. **Silva DAS**, Rodrigues de Lima T, **Tremblay MS**. Association between resting heart rate and health-related physical fitness in Brazilian adolescents. *Biomed Research International* 2018:3812197, 2018.
- 97. **Silva DAS, Gunnel KE, Tremblay MS**. Factor structure of responses to the Portuguese version of questions about screen time-based sedentary behavior among adolescents. *Journal of Physical Activity and Health* 15:263-268, 2018.

HALO ANNUAL REPORT 2018 51 CHEO – RESEARCH INSTITUTE

- 98. **Silva DAS**, **Tremblay MS**, Souza MdFMd, Mooney M, Naghavi M, Malta DC. Mortality and years of life lost by colorectal cancer attributable to physical inactivity in Brazil (1990-2015): findings from the Global Burden of Disease Study. *PLOS ONE* 13(2):e0190943, 2018.
- 99. Spence JC, Faulkner G, Lee EY, Berry T, Cameron C, Deshpande S, Latimer-Cheung AE, Rhodes RE, Tremblay MS. Awareness of ParticipACTION among Canadian adults: A seven-year cross-sectional follow-up. *Health Promotion and Chronic Disease Prevention in Canada* 38(4):179-186, 2018.
- 100. Stephens S, Beyene J, **Tremblay MS**, Faulkner G, Pullnayegum E, Feldman BM. Strategies for dealing with missing accelerometer data. *Rheumatic Disease Clinics of North America* 44(2):317-326, 2018.
- 101. Thivel D, **Chaput JP**, Duclos M. Integrating sedentary behavior in the theoretical model linking childhood to adulthood activity and health? An updated framework. *Physiology & Behavior* 196:33-35, 2018.
- 102. **Tremblay MS**, Costas-Bradstreet C, **Barnes JD**, Bartlett B, Dampier D, Lalonde C, Leidl R, **Longmuir P**, McKee M, Patton R, Way R, Yessis J. Canada's Physical Literacy Consensus Statement: process and outcome. *BMC Public Health* 18(Suppl 2):1034, 2018.
- 103. **Tremblay MS, Longmuir PE, Barnes JD, Belanger K**, Anderson KD, Bruner B, Copeland JL, **Delisle Nyström C**, Gregg MJ, Hall N, Kolen AM, Lane KN, Law B, MacDonald DJ, Martin LJ, Saunders TJ, Sheehan D, Stone MR, Woodruff SJ. Physical literacy levels of Canadian children aged 8-12 years: descriptive and normative results from the RBC Learn to Play CAPL Project. *BMC Public Health* 18(Suppl 2):1036, 2018.
- 104. **Tremblay MS**. The consequences of sedentary behaviors: Keeping interpretations anchored in evidence. *Exercise and Sport Sciences Reviews* 46(1):4, 2018.
- 105. Wachira LJM, Muthuri SK, Ochola SA, Onywera VO, **Tremblay MS**. Screen-based sedentary behavior and adiposity among school children: Results from International Study of Childhood Obesity, Lifestyle and the Environment Kenya. *PLOS ONE* 13(6):e0199790, 2018.
- 106. Walsh JJ, Barnes JD, Cameron JD, Goldfield GS, Chaput JP, Gunnell KE, Ledoux AA, Zemek R, Tremblay MS. Associations between 24 hour movement behaviours and global cognition in US children: a cross-sectional observational study. *Lancet Child & Adolescent Health* 2:783-791, 2018.
- 107. **Walsh J**, Tschakovsky M. Exercise and circulating BDNF: Mechanisms of release and implications for the design of exercise interventions. *Applied Physiology, Nutrition, and Metabolism* 43(11):1095-1104, 2018.
- 108. Walsh J, D'Angiulli A, Cameron J, Sigal R, Kenny G, Holcik M, Doucette S, Alberga A, Prud'homme D, Hadjiyannakis S, Gunnell K, Goldfield G. Changes in Brain-Derived Neurotrophic Factor Are Associated with Improvements in Diabetes Risk Factors after Exercise Training in Adolescents with Obesity: the HEARTY randomized controlled trial. *Neuroplasticity* 2018:7169583, 2018.
- 109. **Walsh J**, Dunlap C, Miranda J, Thorp D, Kimmerly D, Tschakovsky M, Gurd B. Brief, high- intensity exercise improves selective attention in university students. *International Journal of Exercise Science* 11(5):152-167, 2018.
- 110. Wasenius NS, Grattan K, Harvey AL, Barrowman N, Naylor PJ, **Goldfield GS**, **Adamo**, **KB**. The effect of a physical activity intervention on preschoolers' fundamental motor skills a cluster RCT. *Journal of Science and Medicine in Sport* 21(7):714-719, 2018.
- 111. Yun L, Vanderloo L, Berry TR, Latimer-Cheung AE, O'Reilly N, Rhodes RE, Spence JC, Tremblay MS, Faulkner G. Assessing the social climate of physical (in)activity in Canada. *BMC Public Health* 18:1301, 2018.
- 112. Zieff SG, Musselman EA, Sarmiento OL, **Gonzalez SA**, Aguilar-Farias N, Winter SJ, Hipp JA, Quijano K, King AC. Talking the Walk: Perceptions of Neighborhood Characteristics from Users of Open Streets Programs in Latin America and the USA. *Journal of Urban Health* 95(6): 899-912, 2018.

HALO ANNUAL REPORT 2018 52 CHEO – RESEARCH INSTITUTE

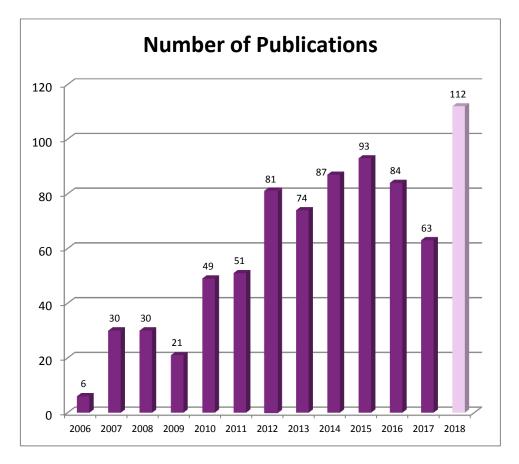


Figure 5: Number of peer-reviewed, refereed publications by HALO Research Group from 2006 to 2018 – for a total of 781 to date.

NON-PEER REVIEWED PUBLICATIONS

- 1. **Aubert S,** Aucouturier J, Ganière C, Fillon A, Genin P, Schipman J, Larras B, Praznoczy C, Duclos M & Thivel D. Results from France's 2018 report card on physical activity for children and youth. *Journal of Physical Activity and Health* 15(S2):S360-S362, 2018.
- 2. **Barnes JD**, Cameron C, **Carson V**, **Chaput JP**, **Colley RC**, Faulkner GE, Janssen I, Kramers R, Saunders TJ, Spence JC, Tucker P, Vanderloo LM, **Tremblay MS**. Results from Canada's 2018 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health* 15 (Suppl. 2):S328-S330, 2018.
- 3. **Chaput JP.** Poor sleep quality associated with increased BMI in children. *Perspective for Endocrine Today*, March 2018, p.21.
- 4. **González SA**, Triana CA, Abaunza C, Aldana L, Arias-Gómez LF, Bermúdez J, Camargo Lemos DM, Cuya JC, Cohen DD, Correa-Bautista JE, Escobar ID, Fajardo KL, García J, Gámez R, Gómez JA, Herazo Beltrán Y, Lizarazo MJ, Lozano O, Martínez PA, Mora M, Páez DC, Ramírez-Vélez R, Rodríguez MI, Ruiz N, Tovar G, Uriza JP, Sarmiento OL. Results from Colombia's 2018 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health* 15(S2):S335-S337, 2018.
- 5. **Lang JJ**. Exploring the utility of cardiorespiratory fitness as a population health surveillance indicator for children and youth: An international analysis of results from the 20-m shuttle run test. *Applied Physiology, Nutrition, and Metabolism* 43(2):211, 2018.
- 6. LeBlanc AG, Chaput JP. School-based intramural programming. Research Brief for Ophea, Winter 2018, 21 pages.

- 7. **Manyanga T**, Munambah NE, Mahachi CB, Makaza D, Tholumusa F, Mlalazi TF, Masocha V, Makoni P, Sithole F, Khumalo B, Rutsate SH, Matsungo T. Results from Zimbabwe's 2018 Report Card on Physical Activity for Children and Youth. (2018). *Journal of Physical Activity and Health* 15(S2): S433-S435, 2018.
- 8. **Tremblay MS**, Vanderloo LM, Cairney J, Choquette L, Collet JP, Davies T, Faulkner G, Gitimoghaddam M, Glossop E, Goldowitz D, **Gunnell K**, Kwan S, Leo J, Markham C, McManus A, Moore S, Pontifex MB, **Walsh J**, Zwicker JG. Expert Statement on Physical Activity and Brain Health in Children and Youth (2018 The ParticipACTION Report Card on Physical Activity for Children and Youth).
- 9. **Tremblay MS**, Barnes JD, Vanderloo Cameron C, Carson V, Chaput JP, Colley R, Faulkner G, Janssen, I, Kramers R, Saunders T, Spence JC, Tucker T, Aubert S, Belanger K, Blais A, Dutil C, Featherstone R, Gibbons R, González S, Larouche R, Lee J, Livock H, Moncion K, Moore C, Walsh J. Canadian kids need to move more to boost their brain health. 2018 The ParticipACTION Report Card on Physical Activity for Children and Youth.

BOOK CHAPTERS

- 1. **Chaput JP**, Tremblay A. Obesity at an Early Age and Its Impact on Child Development. In: Tremblay RE, Boivin M, Peters RDeV, eds. Fisher JO, topic ed. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2018: 1-5. Available at: http://www.child-encyclopedia.com/child-obesity/according-experts/obesity-early-age-and-its-impact-child-development.
- 2. Okely AD, **Tremblay MS**, Hammersley M, **Aubert S**. Targeting sedentary behaviour at the policy level. Leitzmann MF, Jochem C, Schmid D (Eds.) *Sedentary Behaviour Epidemiology*, Springer International Publishing, Switzerland, p. 565-594, 2018.
- 3. Mack DE, Wilson PM, **Gunnell KE**. Moving physical activity research: from quality of life to positive psychological functioning in individuals living with osteoporosis. In W. Néstor Toscano & Rodríguez de la Vega. *Handbook of Leisure, Physical Activity, Sports, Recreation and Quality of Life* (393-406). Switzerland: Springer International Publishing, 2018.

CONFERENCES AND INVITED PRESENTATIONS

- 1. **Aubert S, Barnes J, Forse M**, Schranz N, Vanderloo L, **Gonzalez S**, Ocansey R, Areekul K, Reilly J, Kalinowski J, Katzmarzyk P, **Tremblay MS**. Evidence of Impact of Active Healthy Kids Global Alliance Report Cards. *Active Living Research Conference* (Banff, Canada), 2018.
- 2. **Aubert S.** Report Card grades on the physical activity of children and youth Comparing 30 very high human development index countries. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 3. **Aubert S,** Aucouturier J, Ganière C, Fillon A, Genin P, Schipman J, Larras B, Praznoczy C, Duclos M & Thivel D. Results from France's 2018 report card on physical activity for children and youth. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 4. **Barnes JD**, Cameron C, **Carson V**, **Chaput JP**, **Colley RC**, Faulkner GEJ, Janssen I, Kramers R, Saunders TJ, Spence JC, Tucker P, Vanderloo LM, **Tremblay MS**. Results from Canada's 2018 Report Card on Physical Activity for Children and Youth. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 5. **Barnes JD**, **Delisle Nyström C**, **Tremblay MS**. An exploratory analysis of missing data from the Royal Bank of Canada (RBC) Learn to Play Canadian Assessment of Physical Literacy project. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 6. **Blais AZ, Longmuir PE, Adamo KB,** Lougheed J. Participation of Children with Congenital Heart Disease in a Community-Based Sport Program: Investigating Physical Literacy Outcomes and Perspectives on Physical Activity. *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.

HALO ANNUAL REPORT 2018 54 CHEO – RESEARCH INSTITUTE

- 7. **Blais A, Longmuir PE**. Investigating the perspectives of children with complex congenital heart disease on physical activity: Participation in the "Sportball" program. *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 8. Carsley S, Pope E, Anderson LN, **Tremblay MS**, Tu K, Birken CS. Prevalence of severe obesity and trends over time in a cohort of children and adolescents from primary care electronic medical records in Ontario. *Conference on the Recent Advances in the Prevention and Treatment of Childhood and Adolescent Obesity* (Calgary, Canada), 2018.
- 9. **Chaput JP.** Integration of pediatric sleep health into public health in Canada. *School of Epidemiology and Public Health Seminar Series, University of Ottawa* (Ottawa, Canada), 2018.
- 10. **Chaput JP.** Interactions among sleep, sedentary behaviour, physical activity and overall health. *Royal Canadian Mounted Police National Headquarters* (Ottawa, Canada), 2018.
- 11. **Chaput JP.** Le sommeil, un enjeu de santé à prendre au sérieux. *Royal Canadian Mounted Police* (Montreal, Canada), 2018.
- 12. Chaput JP. How to get a good night's sleep. Courts Administration Service (Ottawa, Canada), 2018.
- 13. **Chaput JP.** How to write a good scientific paper. *Healthy Active Living and Obesity Research Group, CHEO Research Institute* (Ottawa, Canada), 2018.
- 14. **Chaput JP.** Widespread misconceptions about obesity. *Weight Management Interest Group, University of Ottawa* (Ottawa, Canada), 2018.
- 15. **Chaput JP.** Le continuum du mouvement sur 24 heures. *Laboratory of the Metabolic Adaptations to Exercise under Physiological and Pathological Conditions, Université de Clairmont Auvergne* (Clermont-Ferrand, France), 2018.
- 16. **Chaput JP.** The 24-hour movement behaviour continuum is critical for influencing overall health of children. *CIRCUIT colloquium, CHU Sainte-Justine* (Montreal, Canada), 2018.
- 17. Chaput JP. The whole day matters for health and wellness! Colonel By Secondary School (Ottawa, Canada), 2018.
- 18. **Chaput JP.** Inadequate sleep as a cause of obesity in children. *Arnold School of Public Health, University of South Carolina* (Columbia, USA), 2018.
- 19. **Chaput JP.** Mythes largement répandus à propos de l'obésité. *Public event on food and health, Radio-Canada* (Montreal, Canada), 2018.
- 20. **Chaput JP.** Directives canadiennes en matière de mouvement sur 24 heures pour les enfants de 0 à 4 ans: une approche intégrée regroupant l'activité physique, le comportement sédentaire et le sommeil. *Département de kinésiologie, Université de Montréal* (Montreal, Canada), 2018.
- 21. **Chaput JP.** Interactions entre le sommeil, le comportement sédentaire et l'activité physique pour influencer la santé. *Faculté des sciences de l'activité physique, Université de Sherbrooke* (Sherbrooke, Canada), 2018.
- 22. **Chaput JP.** Bouger davantage n'est pas équivalent à passer moins de temps assis. *School of Public Health, University of Montreal* (Montreal, Canada), 2018.
- 23. **Chaput, JP.** Interactions among sleep, sedentary behaviour, physical activity and overall health. *Canadian Forces Health Services Group Headquarters, Department of National Defence* (Ottawa, Canada), 2018.
- 24. **Chaput JP.** How to write a good scientific paper. *School of Epidemiology and Public Health, University of Ottawa* (Ottawa, Canada), 2018.

HALO ANNUAL REPORT 2018 55 CHEO – RESEARCH INSTITUTE

- 25. **Chaput JP, Livock H, Barnes JD**, Pouliot C, LeBlanc AG, Saunders TJ, **Tremblay MS**, Prud'homme D. Exercising with a screen or music and post-exercise energy compensation in male adolescents. *The Obesity Society Annual Meeting* (Nashville, USA), 2018.
- 26. **Delisle Nyström C**, Traversy G, **Barnes JD**, **Chaput J-P**, **Longmuir PE**, **Tremblay MS**. Associations between domains of physical literacy by weight status in 8-12 year old Canadian children. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 27. **Dutil C,** De Pieri J, Maslovat D, Smith V, Carlsen AN. In a sample of adequate sleepers learning a serial key-press task, online and offline gains are not impaired by sleep characteristics or movement inhibition. *Canadian Society for Psychomotor Learning and Sport Psychology* (Toronto, Canada), 2018.
- 28. Eny KM, Maguire JL, Dai D, Lebovic G, Adeli K, Hamilton J, Hanley A, Mamdani M, McCrindle B, **Tremblay M**, Parkin PC, and Birken CS, and the TARGet Kids! collaboration. Accelerated growth in early childhood is associated with increased systolic and diastolic blood pressure. *2018 Canadian Paediatric Society Meeting* (Quebec City, Canada), 2018.
- 29. Eny KM, Maguire JL, Dai D, Lebovic G, Adeli K, Hamilton J, Hanley A, Mamdani M, McCrindle B, **Tremblay M**, Parkin PC, Birken CS. Accelerated growth in early childhood is associated with higher systolic and diastolic blood pressure. *Pediatric Academic Societies Meeting* (Toronto, Canada), 2018.
- 30. Faulkner G, Bassett-Gunter R, White L, Berry T, **Tremblay MS**. Can The Moblees move Canadian children? Investigating the impact of a television program on children's physical activity. *International Society for Behavioral Nutrition and Physical Activity Annual Conference* (Hong Kong), 2018.
- 31. **Goldfield GS**. Mental Health in Youth with Obesity. *4th Annual International Congress of Obesity: Treatment of Obesity and Non-Communicable Diseases* (Maringa, Brazil), 2018.
- 32. Goldfield GS. Raising Resilient Children. Colonel By High School (Ottawa, Canada), 2018.
- 33. **Goldfield GS**, Valois D, **Buchholz A**, Obeid N, Henderson KA, **Cameron JD**, **Murray MA**, **Mougharbel F**, **Chaput JP**, Flament M, Restrained Eating Mediates the Relationship Between Weight-based Teasing and BMI in Canadian youth. *International Obesity Week Conference* (Nashville, USA), 2018.
- 34. **González S**, Lemoine P, **Larouche R**, Meisel Donoso JD, **Tremblay MS**, Broberg A, Broyles S, Fogelholm M, Holguin Villarreal GA, Katzmarzyk P, Lambert EV, Uys M, Sarmiento Dueñas OL. Active transport among children from Canada, Colombia, Finland, South Africa and the United States: A tale of two journeys. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 35. **González SA**, Triana CA, Abaunza C, Aldana L, Arias-Gómez LF, Bermúdez J, Camargo Lemos DM, Cuya JC, Cohen DD, Correa-Bautista JE, Escobar ID, Fajardo KL, García J, Gámez R, Gómez JA, Herazo Beltrán Y, Lizarazo MJ, Lozano O, Martínez PA, Mora M, Páez DC, Ramírez-Vélez R, Rodríguez MI, Ruiz N, Tovar G, Uriza JP, Sarmiento OL. Results from Colombia's 2018 Report Card on Physical Activity for Children and Youth. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 36. **González SA**. Report Card grades on the physical activity of children and youth from 10 countries with high human development index. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 37. **González SA.** Colombia's 2018 Report Card on Physical Activity for Children and Youth: Official Launch. *VII Course on Policy and Programs for the Promotion of Healthy Habits and Lifestyles* (Bogotá, Colombia), 2018.
- 38. **Guerrero MD**, **Walsh JJ**, **Barnes JD**, **Goldfield G**, **Tremblay MS**. Associations between meeting the Canadian 24-hour movement behaviours and impulsivity control in school-aged children. *Canadian Society for Exercise Physiology Annual Conference* (Niagara Falls, Canada), 2018.

HALO ANNUAL REPORT 2018 56 CHEO – RESEARCH INSTITUTE

- 39. **Guerrero M**, **Lee E-Y**, **Gray CE**, **Tremblay MS**. A pilot assessment of the Forest and Nature School early childhood education and development program in Canada. *Outdoor Play and Early Learning Policy Research Invitational Symposium* (Toronto, Canada), 2018.
- 40. **Gunnell KE**, Poitras VJ, LeBlanc A, Schibli K, **Barbeau K**, Hedayati N, Ponitfex MB, **Goldfield GS**, Dunlap C, Lehan E, **Tremblay MS**. Physical activity and cognition in children and youth: A systematic review. *Canadian Society for Psychomotor Learning and Sport Psychology Conference* (Toronto, Canada), 2018.
- 41. **Gunnell KE**, Schibli K, Poitras VJ, Hedayati N, **Barbeau K**, **Goldfield G**, **Tremblay MS**. Sedentary behaviour and cognition in children and youth: A systematic review. *International Congress of Applied Psychology* (Montréal, Canada), 2018.
- 42. Hintze LJ, **Goldfield G,** Doucet E. The rate of weight-loss does not affect appetite sensations differently in women living with obesity. *25th European Congress on Obesity* (Vienna, Austria), 2018.
- 43. Kakon G, **Hadjiyannakis S**, Sigal RJ, **Goldfield GS**, Prud'homme D, Kenny GP, Doucette S, Alberga AS. The Edmonton Obesity Staging System for Pediatrics (EOSS-p), Cardiorespiratory Fitness and Quality of Life in Adolescents with Obesity. *Canadian Obesity Network Student and New Professional (CON-SNP) Conference* (London, Canada), 2018.
- 44. **Lang JJ**, Tomkinson GR, Janssen I, Ruiz JR, Ortega FB, **Tremblay MS**. Making a case for cardiorespiratory fitness surveillance among children and youth. *Public Health 2018* (Montreal, Canada), 2018.
- 45. Lang JJ, Chaput JP, Longmuir PE, Barnes JD, Belanger K, Tomkinson GR, Anderson KD, Bruner B, Copeland JL, Gregg MJ, Hall N, Kolen AM, Lane KN, Law B, MacDonald DJ, Martin LJ, Saunders TJ, Sheehan D, Stone MR, Woodruff SJ, Tremblay MS. Cardiorespiratory fitness is associated with physical literacy in a large sample of Canadian children aged 8 to 12 years. *Public Health 2018* (Montreal, Canada), 2018.
- 46. **Larouche R**, Blanchette S, Faulkner G, **Leduc G**, Riazi N, Trudeau F, **Tremblay M**. Children's active transportation: The interplay of individual, parental and social factors. *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 47. **Larouche R**, Mire E, **Belanger K**, Barreira T, **Chaput JP**, Fogelholm M, Hu G, Lambert E, Maher C, Maia J, Olds T, Onywera V, Sarmiento O, Standage M, Tudor-Locke C, Katzmarzyk P, **Tremblay M**. Relationships between outdoor time, physical activity, sedentary behavior and obesity in children: a 12-country study. *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 48. **Larouche R**, Leduc G, Trudeau F, Faulkner G, **Tremblay MS**. Test-retest reliability and construct validity of parental reports of children's outdoor time. *Active Living Research Conference* (Banff, Canada), 2018.
- 49. **Lee E-Y, Barnes JD, Lang JJ, Silva DAS**, Tomkinson GR, **Tremblay MS**. Cardiorespiratory fitness and cardiometabolic health outcomes among American youth (aged 12-17 years): Developing criterion-referenced cut-points. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 50. **Lee E-Y, Carson V**, Jeon JY, Spence JC, **Tremblay MS**. Levels and correlates of 24-hour movement behaviours among South Koreans: Results from the Korea National Health and Nutrition Examination Surveys, 2014-15. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 51. **Lee EY**, Spence JC, **Tremblay MS**, **Carson V**. Meeting 24-Hour Movement Guidelines for Children and Youth and associations with psychological well-being among South Korean adolescents. *International Society for Behavioral Nutrition and Physical Activity Annual Conference* (Hong Kong), 2018.
- 52. **Lee E-Y. Gray CE**, **Tremblay MS**. A pilot assessment of the forest and nature school early childhood education and development program in Canada: Rationale and study protocol for a randomized controlled trial. *Existing Evidence about the Effects if Udeskole an International Perspective Conference* (Fredensborg, Denmark), 2018.
- 53. Lee E-Y. Day 1 Wrap-up. Movement to Move Conference (Adelaide, Australia), 2018.

HALO ANNUAL REPORT 2018 57 CHEO – RESEARCH INSTITUTE

- 54. **Lee E-Y.** Sedentary Living to Healthy Active Living: One PhD and two post-doc training that shaped my research career path. *Healthy Active Living and Obesity (HALO) Research Group, Children's Hospital of Eastern Ontario Research Institute* (Ottawa, Canada), 2018.
- 55. Lee E-Y. HALO research 1.0. Carleton University HLTH3401 Childhood Diseases (Ottawa, Canada), 2018.
- 56. Lee E-Y. Research Program. School of Kinesiology and Health Studies, Queen's University (Kingston, Canada), 2018.
- 57. **Lee J**, Alpous A, Yusuf W, Cardarelli S, Rhodenizer T, Shaw-Swettenham K, Adams R, **Longmuir PE**. Y Kids Academy improves knowledge of healthy living in young adolescents. *Canadian Society for Exercise Physiology* (Niagara Falls, Canada), 2018.
- 58. **Lee J**, Lai L, Gow RM, Gardin L, Sananes R, **Goldfield G, Longmuir PE**. Mental health and quality of life concerns among children with cardiac diagnoses: Which patients are at risk and how can they be identified? *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 59. Longmuir PE, Barnes JD, Belanger K, Anderson KD, Bruner B, Copeland JL, Gregg MJ, Hall N, Kolen AM, Lane KN, Law B, MacDonald DJ, Martin LJ, Saunders TJ, Sheehan D, Stone MR, Woodruff SJ, Tremblay MS. Physical literacy levels of Canadian children aged 8-12 years: Descriptive and normative results from the RBC Learn to Play CAPL Project. North American Society for Pediatric Exercise Medicine Biennial Conference (Oakland, USA), 2018.
- 60. **Longmuir PE, Moore C.** Physical literacy: Enabling the capacity to live an active life. *The Hospital for Sick Children* (Toronto, Canada), 2018.
- 61. **Longmuir PE, Moore C**. Physical literacy: Enabling the capacity to live an active life. *Holland Bloorview Children's Rehab Hospital* (Toronto, Canada), 2018.
- 62. **Longmuir PE**, Jackson J, Ertel E, Bhatt M, Doja A, Duffy C, Gardin L, Jurencak R, Katz SL, Lai L, Lamontagne C, Lee S, Lougheed J, McCormick A, McMillan H, Pohl D, Roth J, Theoret-Douglas C, Watanabe Duffy K, Wong D, Zemek R. Sensitivity, specificity and reliability of the Get Active Questionnaire for children with/without special considerations for physical activity. *Canadian Society for Exercise Physiology* (Niagara Falls, Canada), 2018.
- 63. **Longmuir PE**, Jackson J, Ertel E, Bhatt M, Doja A, Duffy C, Gardin L, Jurencak R, Katz SL, Lai L, Lamontagne C, Lee S, Lougheed J, McCormick A, McMillan H, Pohl D, Roth J, Theoret-Douglas C, Watanabe Duffy K, Wong D, Zemek R. Sensitivity, specificity and reliability of the Get Active Questionnaire for identifying children with medically necessary special considerations for physical activity. *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 64. MacDonald DJ, Saunders TJ, **Longmuir PE**, **Barnes JD**, **Belanger K**, Bruner B, Copeland JL, Gregg MJ, Hal N, Kolen AM, Law B, Martin LJ, Sheehan D, Woodruff SJ, **Tremblay MS**. The relationship between age, gender, and physical measures with adequacy in and predilection for physical activity. *Canadian Society for Psychomotor Learning and Sport Psychology Conference* (Toronto, Canada), 2018.
- 65. **Manyanga T, Chaput J-P, Barnes J**, Katzmarzyk P, **Tremblay MS** for the ISCOLE Research Group. No evidence for an epidemiological transition in sleep patterns among children: a 12-country study. 3rd International Conference on Physical Activity, Sport and Health for Development in Africa (Accra, Ghana), 2018.
- 66. **Manyanga T**. Physical Activity and Obesity findings from ISCOLE Mozambique. *IC-Physical Activity, Sport and Health for Development in Africa* (Accra, Ghana), 2018.
- 67. **Manyanga T**. Indicators of physical activity among children and youth in nine countries with low-to-medium human development indices. *Movement to Move Conference* (Adelaide Australia), 2018.
- 68. **Manyanga T**, Uddin R, Tladi D. Realities, challenges, and opportunities to keep kids in the developing world moving: beyond the Movement to Move. *Movement to Move Conference* (Adelaide Australia), 2018.

HALO ANNUAL REPORT 2018 58 CHEO – RESEARCH INSTITUTE

- 69. Mclaren C, **Buchholz A**, Hammond N, **Goldfield GS**, **Hadjiyannakis S**, Norris ML, Spettigue W, Obeid N. Examining Shape And Weight Concerns Among Adolescents in Tertiary-Care Based Obesity and Eating Disorder Programs. *Canadian Obesity Network Student and New Professional (CON-SNP) Conference* (London, Canada), 2018.
- 70. Melby Ps, Elsborg P, Nielsen G, **Tremblay M**, Bentsen P. Investigating and measuring physical literacy and kits health-related correlates in Danish children. *10th IUHPE European Conference and International Forum for Health Promotion Research Conference* (Trondheim, Norway), 2018.
- 71. **Moncion K**, Bangawan F, McCrindle BW, Russell JL, **Longmuir PE**. Resting metabolic rates in children with complex congenital heart disease do not differ from healthy age matched children. *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 72. Moore SA, Vanderloo LM, Cairney J, McManus A, Choquette L, Collet JP, Davies T, Faulkner G, Gitimoghadam M, Glossop E, Goldowitz D, **Gunnell K**, Kwan S, Leo J, Markham C, Pontifex MB, **Walsh J**, Zwicker JG, **Tremblay MS**. Physical Activity and Brain Health in Children and Youth: Findings from the 2018 ParticipACTION Expert Panel. *North American Society for Pediatric Exercise Medicine Biennial Conference* (Oakland, USA), 2018.
- 73. **Moore C**, Pohl D, Lougheed J, McMillan H, Doja A, Roth J, Venkateswaran S, Johnston D, Klaassen R, McCormick A, Macartney G, Katz S, Boafo A, Sell E, **Longmuir PE**. Physical literacy screening is feasible in the clinical setting for children with medical conditions and disabilities. *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 74. **Murray MA**, Obeid N, Henderson K, **Buchholz A**, Flament MF, **Goldfield GS**. A Longitudinal Path Model of Screen Time, Depressive Symptoms, Body Image, and Disordered Eating. *126thAnnual Convention of the American Psychological Association* (San Francisco, USA), 2018.
- 75. Okely A, **Tremblay MS**, Reilly J, Hongyan G, Florindo A, Draper C. Surveillance study of movement behaviours in the early years. Workshop at *the International Society of Behavioral Nutrition and Physical Activity Annual Conference* (Hong Kong), 2018.
- 76. Onywera VO, **Larouche R**, Oyeyemi AL, Prista A, Akinroye KK, Heyker S, Owino GE, **Tremblay MS**. Development and convergent validity of new self-administered questionnaires of active transportation in three African countries: Kenya, Mozambique and Nigeria. 3rd International Conference on Physical Activity, Sport and Health for Development in Africa (Accra, Ghana), 2018.
- 77. Riazi N, Blanchette S, **Leduc G**, Trudeau F, **Tremblay M**, **Larouche R**, Faulkner G. Correlates of childhood independent mobility in Canada: Location, location, location. *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 78. Riazi N, Ramanathan S, O'Neill M, **Tremblay MS**, Faulkner G. Canadian 24-Hour Movement Guidelines for the Early Years (Ages 0-4): Exploring the perceptions of stakeholders regarding their acceptability, barriers to uptake, and dissemination. *Active Living Research Conference* (Banff, Canada), 2018.
- 79. Sarmiento OL, **Gonzalez SA**, Lemoine PD, **Larouche R**, Meisel JD, **Tremblay M**, Broberg A, Broyles S, Fogelholm M, Holguin G, Naranjo M, Lambert EV, Uys M, Dentro Denstel K, Onywera V, Barreira T, **Chaput JP**, Hu G, Kuriyan R, Kurpad A, Maher C, Maia J, Matsudo V, Olds T, Standage M, Tudor-Locke C, Zhao P, Church TS, Katzmarzyk P. Walking or biking to school in low- middle- and high-income cities: lower adiposity indicators in the context of a need vs. choice framework. *Walk 21 Conference* (Bogota, Colombia), 2018.
- 80. **Silva DAS, Chaput J-P**, Katzmarzyk PT, Fogelholm M, Hu G, Maher C, Olds T, Onywera V, Sarmiento OL, Standage M, Tudor-Locke C, **Tremblay MS**. Participation in Physical Education classes and physical activity and sedentary behavior in children. *American College of Sports Medicine Annual Meeting* (Minneapolis, USA), 2018.
- 81. **Silva DAS**, **Lee EY**, **Barnes J**, **Lang JJ**, Tomkinson GR, **Tremblay MS**. Association between cardiorespiratory fitness and body image perception in adolescents in Brazil: evidence for criterion-referenced cut-points. *Brazilian Congress of Metabolism*, *Nutrition and Exercise* (Londrina, Brazil), 2018.

HALO ANNUAL REPORT 2018 59 CHEO – RESEARCH INSTITUTE

- 82. Szwimer E, Mougharbel F, **Goldfield GS**, Alberga AS. The effects of familial and peer weight teasing in childhood and adolescence on mental health outcomes in youth and adulthood: A systematic review. *Canadian Obesity Network Student and New Professional (CON-SNP) Conference* (London, Canada), 2018.
- 83. Tennant EM, **Tremblay MS**, Faulkner G, Gainforth HL, **Latimer-Cheung AE**. Exploring parents' perceptions of the Canadian 24-Hour Movement Guidelines for Children and Youth. *22nd Annual Eastern Canada Sport and Exercise Psychology Symposium* (Montreal, Canada), March, 2018.
- 84. Tomkinson GR, Lang JJ, Tremblay MS. Temporal trends in the cardiorespiratory fitness of children and adolescents representing 19 high-income and upper-middle-income countries between 1981 and 2014. *International Society for Behavioral Nutrition and Physical Activity Annual Conference* (Hong Kong), 2018.
- 85. **Tremblay MS**. Active Healthy Kids Global Alliance Global Matrix 3.0 pre-launch workshop. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 86. **Tremblay MS**. Active Healthy Kids Global Alliance Global Matrix 3.0 Launch. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 87. **Tremblay MS.** Active Healthy Kids Global Alliance Global Matrix 3.0 post-conference workshop. *Movement to Move Conference* (Adelaide, Australia), 2018.
- 88. **Tremblay MS**, **Barnes JD**, Cameron C, **Carson V**, **Chaput JP**, **Colley RC**, Faulkner GEJ, Janssen I, Kramers R, Saunders TJ, Spence JC, Tucker P, Vanderloo LM. Results from Canada's 2018 Report Card on Physical Activity for Children and Youth. *Canadian Society for Exercise Physiology Annual Conference* (Niagara Falls, Canada), 2018.
- 89. **Tremblay MS**. Innovation, technology and childhood healthy active living: moving forward by looking back. Invited keynote address at the *Conference on the Recent Advances in the Prevention and Treatment of Childhood and Adolescent Obesity* (Calgary, Canada), 2018.
- 90. **Tremblay MS**, Bauman A, Draper C, Mutrie N, Troiano R, Kahlmeier S. Physical activity guidelines debate. Invited plenary speaker at the *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 91. **Tremblay MS**. Policy lessons learned through the Active Healthy Kids Global Alliance Report Cards. *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 92. **Tremblay M, Chaput JP, Adamo K, Aubert S, Barnes J,** Choquette L, Duggan M, Faulkner G, **Goldfield G, Gray C,** Gruber R, Janson K, Janssen I, Janssen X, Jaramillo Garcia A, Kuzik N, LeBlanc C, MacLean J, Okely A, Poitras V, Raynor ME. Canadian 24-hour movement guidelines for the Early Years (0-4 years): An integration of physical activity, sedentary behaviour and sleep. *International Society for Physical Activity and Health Congress* (London, UK), 2018.
- 93. **Tremblay MS**. International comparisons of physical activity indicators in children in Africa: insights from the Global Matrix 2.0. 3rd International Conference on Physical Activity, Sport and Health for Development in Africa (Accra, Ghana), 2018.
- 94. **Tremblay MS**. ISCOLE Mozambique: Rationale and Protocol. *Colaboracoes Internacionais em Mocambique e o Estudo Internacional da Obesidade Infantil, Estilo de Vida e Meio Ambiente Symposium*, Universidade Pedagogica (Maputo, Mozambique), 2018.
- 95. **Tremblay MS**. Setting the context and the need for less screen time and more green time. Invited keynote address at the *Healthy Kids Community Challenge Ottawa Community Learning Forum "From Screen Time to Green Time" Connecting Back to the Outdoors* (Ottawa, Canada), 2018.
- 96. **Tremblay MS**. Parks for health: Nature and the outdoors as an antidote for modern living. Invited keynote address at the *British Columbia Recreation and Parks Association Annual Symposium* (Vancouver, Canada), 2018.
- 97. **Tremblay MS**. Physical Literacy: New Direction of Youth Fitness Assessment? Invited presentation in the Measurement & Evaluation Symposium at the *SHAPE America National Convention* (Nashville, USA), March 2018.

HALO ANNUAL REPORT 2018 60 CHEO – RESEARCH INSTITUTE

- 98. **Tremblay MS**. Canadian 24-Hour Movement Guidelines, Trends in Childhood Physical Activity, and Thoughts on Getting Kids Active. Invited lecture at the *Nova Scotia Physical Activity Practitioner Exchange* (Halifax, Canada), 2018.
- 99. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. *Mount St. Vincent University* (Halifax, Canada), 2018.
- 100. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. *Université de Moncton* (Moncton, Canada), 2018.
- 101. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. *University of New Brunswick* (Fredericton, Canada), 2018.
- 102. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Lecture to students at the *University of Prince Edward Island* (Charlottetown, Canada), 2018.
- 103. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Public lecture at the *University of Prince Edward Island* (Charlottetown, Canada), 2018.
- 104. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Public lecture at *Memorial University of Newfoundland* (St. Johns, Canada), 2018.
- 105. **Tremblay MS**. Canadian 24-Hour Movement Guidelines and other Physical Activity Initiatives in Canada. Presentation to *Government of Newfoundland and Labrador* (St. Johns, Canada), 2018.
- 106. Tremblay MS, Carson V, Chaput J-P, Adamo KB, Aubert S, Choquette L, Duggan M, Faulkner G, Goldfield GS, Gray CE, Gruber R, Janson K, Janssen I, Janssen X, Kuzik N, LeBlanc C, MacLean J, Okely A, Poitras VJ, Rayner M-E, Reilly JJ, Sampson M, Spence JC, Timmons BW. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Active Living Research Conference (Banff, Canada), 2018.
- 107. **Tremblay MS**. Canadian 24-Hour Movement Guidelines for the Early Years (0-4 years): An Integration of Physical Activity, Sedentary Behaviour, and Sleep. *Canadian Society for Exercise Physiology Professional Development Day* (Vancouver, Canada), 2018.
- 108. **Tremblay MS**. Background and overview of Canadian 24-Hour Movement Guidelines for the Early Years development. Symposium presentation at the *Early Years Conference* (Vancouver, Canada), 2018.
- 109. **Tremblay MS**. How to be a good mentor to your students. *CHEO Research Institute Seminar Series* (Ottawa Canada), 2018.
- 110. **Tremblay MS**. Canadian Health Measures Survey: a brief review from the beginning. Invited presentation at the *Canadian Health Measures Survey 10-Year Celebration* (Ottawa, Canada), 2018.
- 111. Valois DD, Davis CG, **Buchholz A**, Obeid N, Henderson K, Flament MF, **Goldfield GS**. Effects of Weight Teasing on Body Image in Youth with Obesity: The Protective Role of Attachment Style and Social Support. *19th annual Society for Personality and Social Psychology Conference* (Atlanta, USA), 2018.
- 112. Vanderloo LM, McFadden K, Berry T, Chulak-Bozzer T, **Tremblay MS**, Spence JC, **Latimer AE**, O'Reilly N, Faulkner G, Rhodes RE, Nguyen H. Examination of current participation in physical activities and intention to continue among participants in a national physical activity initiative. *International Society for Behavioral Nutrition and Physical Activity Annual Conference* (Hong Kong), 2018.

HALO ANNUAL REPORT 2018 61 CHEO – RESEARCH INSTITUTE

- 113. Vanderloo LM, Maguire JL, Dai D, Parkin P, **Tremblay MS**, Birken CS. Association between parent-reported physical activity and cardiometabolic risk in young children. *Pediatric Academic Societies Meeting* (Toronto, Canada), 2018.
- 114. **Walsh JJ**, Nowak-Flück D, Pontifex MB, **Tremblay MS**, McManus AM. Associations between neurovascular coupling and cognitive function in school-aged children: a pilot study. *Canadian Society for Exercise Physiology Annual Conference* (Niagara Falls, Canada), 2018.
- 115. Walsh JJ, Barnes JD, Cameron JD, Goldfield GS, Chaput J-P, Gunnell KE, Ledoux A-A, Zemek R, Tremblay MS. Associations between adherence to the 24-hour movement guidelines and global cognition in school-aged children. *Canadian Society for Exercise Physiology Annual Conference* (Niagara Falls, Canada), 2018.
- 116. **Walsh J**, Dunlap C, Miranda J, Thorp D, Kimmerly D, Tschakovsky ME, Gurd BJ. Brief, high-intensity exercise improves selective attention in university students. *Movementis Conference* (Boston, USA), 2018.
- 117. **Walsh J**, Drouin PJ, King TJ, D'Urzo KA, Tschakovsky ME, Day TA. Acute exercise impairs cognitive function at high altitude. *Okanagan Cardiovascular and Respiratory Symposium* (Vernon, Canada), 2018.
- 118. **Walsh J**, Nowak-Flück D, Pontifex M, **Tremblay M**, McManus A. Associations between neurovascular coupling and cognitive function in school-aged children: A pilot study. *Canadian Society for Exercise Physiology Professional Development Day* (Vancouver, Canada), 2018.
- 119. **Walsh J, Goldfield G**, Kenney G, Sigal R, Doucette S. Gurd B. Interindividual Variability and Adverse Responses to Body Composition with Exercise Training in Adolescents with Obesity. *American College of Sports Medicine Annual Meeting* (Minneapolis, USA), 2018.
- 120. **Yaraskavitch J**, Graham J, Lai L, **Longmuir PE**. Developing physical activity resources for individuals with congenital heart disease: What is most important to patients? *North American Society for Pediatric Exercise Medicine* (Oakland, USA), 2018.
- 121. Yun L, Vanderloo L, Berry T, **Latimer-Cheung A**, Van Nguyen H, O'Reilly N, Rhodes R, Spence J, **Tremblay M**, Faulkner G. Assessing the social climate of physical activity in Canada. *International Society for Physical Activity and Health Congress* (London, UK), 2018.

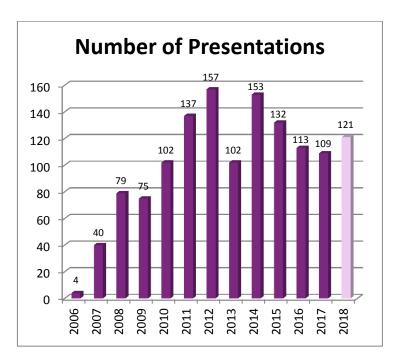


Figure 6: Number of scholarly presentations by HALO Research Group from 2006 to 2018 for a total of 1324 to date.

HALO ANNUAL REPORT 2018 62 CHEO – RESEARCH INSTITUTE

MEMORANDA OF UNDERSTANDING

To facilitate research and collaboration, HALO has developed a memoranda of understanding with the following organizations/institutions:

- HALO-CHEO RI and University Bernardo O'Higgins (Santiago, Chile)
- HALO-CHEO RI and Department of Pediatrics, McMaster Universit (Hamilton, Canada)
- HALO-CHEO RI and Child and Nature Alliance of Canada (Ottawa, Canada)
- University of Ottawa and the State University of Maringá (Maringá, Brazil)
- HALO-CHEO RI and Pennington Biomedical Research Centre (Baton Rouge, USA)
- HALO-CHEO RI and Kenyatta University (Nairobi, Kenya)
- HALO-CHEO RI and University of Copenhagen (Copenhagen, Denmark)
- HALO-CHEO RI and University of Wollongong (Wollongong, Australia)
- HALO-CHEO RI and Research Center of Sports and Physical Activity Pedagogic University Mozambique (Maputo, Mozambique)



STRATEGIC PARTNERSHIPS

The Healthy Active Living and Obesity Research Group is honoured to have the following organizations as strategic partners:

- Active Healthy Kids Global Alliance
- Alberta Centre for Active Living
- Canadian Fitness and Lifestyle Research Institute
- Canadian Society for Exercise Physiology
- **Carleton University**
- Champlain Cardiovascular Disease Prevention Network
- **CHEO Foundation**
- CHEO Research Institute
- Child and Nature Alliance of Canada
- Health Analysis Division, Statistics Canada
- Health Nexus: Best Start Resource Centre
- Kenyatta University
- **KidActive**
- Kids Brain Health Network
- McMaster University
- Nature Canada

- **Obesity Canada**
- Ottawa Public Health
- **Outdoor Play Canada**
- **ParticipACTION**
- Pennington Biomedical Research Centre
- Sedentary Behaviour Research Network
- State University of Maringá
- The Lawson Foundation
- "The Moblees"
- The Ottawa Hospital
- University Bernardo O'Higgins
- University of Copenhagen
- University of Ottawa
- University of Ottawa Institute of Mental Health Research
- University of Wollongong
- YMCA/YWCA of the National Capital Region





























The Ottawa | L'Hôpital Hospital d'Ottawa



































Canadian Fitness and Lifestyle Research Institute













Healthy Active Living and Obesity Research Group (HALO) Children's Hospital of Eastern Ontario, Research Institute 401 Smyth Road, Ottawa, ON K1H 8L1

Please visit our HALO web site at www.haloresearch.ca

Kheana Barbeau

Research Assistant 613-737-7600 ext. 4134 kbarbeau@cheo.on.ca

Jameason Cameron

Research Coordinator 613-737-7600 ext. 4103 jcameron@cheo.on.ca

Natasha Cinanni

Research Coordinator 613-737-7600 ext. 4005 ncinanni@cheo.on.ca

Michelle Guerrero

Post-Doctoral Fellow 613-737-7600 ext. 4158 mguerrero@cheo.on.ca

Pat Longmuir

Research Scientist 613-737-7600 ext. 3908 plongmuir@cheo.on.ca

Shikha Saxena

Post-Doctoral Fellow 613-737-7600 ext. 4400 ssaxena@cheo.on.ca

Joel Barnes

Knowledge and Data Analyst 613-737-7600 ext. 4148 jbarnes@cheo.on.ca

Stephanie Carson

Research Coordinator 613-737-7600 ext. 4134 scarson@cheo.on.ca

Megan Forse

Research Assistant 613-737-7600 ext. 4118 mforse@cheo.on.ca

Stasia Hadjiyannakis

Pediatric Endocrinologist, CHAL 613-737-7600 ext. 3939 shadjiyannakis@cheo.on.ca

Sophia Roubos

Research Assistant 613-737-7600 ext. 4001 sroubos@cheo.on.ca

Mark Tremblay

Director, HALO 613-737-7600 ext. 4114 mtremblay@cheo.on.ca

Annick Buchholz

Psychologist, CHAL 613-260-1477 ext. 224 abuchholz@cheo.on.ca

Jean-Philippe Chaput

Research Scientist 613-737-7600 ext. 3683 jpchaput@cheo.on.ca

Gary Goldfield

Clinical Scientist 613-737-7600 ext. 3288 ggoldfield@cheo.on.ca

Hélène Larocque

Research Administrative Assistant 613-737-7600 ext. 4102 hlarocque@cheo.on.ca

Jane Rutherford

Exercise Specialist, CHAL 613-260-1477 ext. 222 jrutherford@cheo.on.ca

Jenna Yaraskavitch

Research Assistant 613-737-7600 ext. 4003 jyaraskavitch@cheo.on.ca PLAY. EXPLORE. CONNECT.





