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Research Report!



Photo Credit: UNICEF Canada

My Cat Makes Me Happy What Canada's youth told us about their well-being

UNICEF Canada

A new UNICEF Canada report released August 8th, 2017 highlights what Canada's youth consider critical to their well-being. Among the insights, holistic health and a sense of belonging top the list.

In [My Cat Makes Me Happy](#), UNICEF Canada outlines the findings of workshops held across Canada to learn directly from youth what well-being means to them, and to gain a better sense about what it's like to grow up in Canada.

Canada currently ranks 25th out of 41 rich nations in overall child well-being. When compared against 21 indicators related to progress towards the global Sustainable Development Goals for children and youth, Canada ranks in the middle – a place it has held for more than a decade. Child homicide, suicide, and bullying, in particular, are all at alarmingly high levels.

“Right now, Canada isn't the best place in the world for children to grow up in. In fact, it's not even in the top 20,” said Alli Truesdell, UNICEF Canada's Youth Participation Lead. “We need to better understand why that is and do more to become the country that truly reflects our shared Canadian values.”

Key findings

According to the youth report, health (34.5 per cent) and relatedness (18.2 per cent) top the list of factors most important

to child and youth well-being, followed closely by equity (12.8 per cent), education and employment (12.3 per cent), youth engagement (12.3 per cent), affordable living conditions (6.7 per cent) and access to spaces and a healthy environment (3.3 per cent).

Canada's youth weigh in

Liam, 17, participated in one of the youth workshops.

“You need to dig deeper to understand what matters to youth more precisely,” he said. “You can't just focus on the basics.”

Olivia, 16, stressed the need for change. “There's so much room for improvement,” she said. “It starts with taking initiative; it starts with taking action.”

Relationships and belonging are key for Canada's kids

“What we heard from Canada's youth is that objective measures alone - like young people's physical health, how they are doing in school and how much time they spend online - will not capture whether young people are doing well,” said Truesdell. “In wealthy countries, we need to be measuring things far beyond basic needs, though these are not very fairly distributed. For young people, well-being is much broader. Just as important as their physical health and school grades are the quality of their

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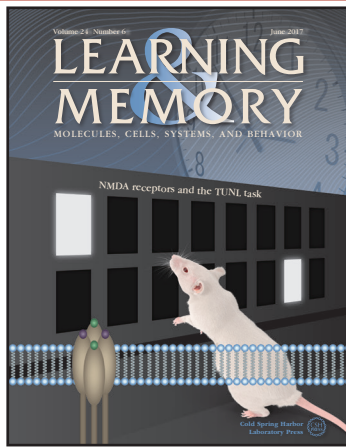


Image of Interest

Research in Dr. John Howland's laboratory includes assessing the effects of maternal infection during pregnancy on behaviour of the offspring related to psychiatric disorders in humans. A current study is testing whether maternal cytokines, following infection, can be used to predict the behavioural phenotype of the offspring. These experiments are performed in rats using a variety of tests such as the one depicted in the image above. In this test of working memory, rats are required to remember the location of an image presented on a touchscreen for a short delay to obtain a food reward on a subsequent test trial with two images displayed.

This image by Carrie Gates, Nadine K. Zabder, and Brittney N. Lins., was produced for the cover of the June, 2017 issue of *Learning & Memory*. Dr. Howland's laboratory is in the Department of Physiology, College of Medicine, U of S.

Image used with permission of Cold Spring Harbor Laboratory Press.

Sex and Gender in Research

Dr. Erin Prosser-Loose

Issues of sex and gender in science and health research are not new, but recently have become more prominent. This heightened awareness is in response to overdue recognition that gaps exist in understanding biological sex differences and that gender bias remains a powerful presence in both the health delivery systems and research. The Canadian Institutes of Health Research (CIHR) are addressing these issues with focused training and requirements for applicants, as well as examination of biases in their own funding programs. It is important for researchers to consider possible influences and/or gaps in their research and find ways to tackle them so that health and research environments can be a place where everyone is represented, and can benefit.

Sex refers to biological attributes such as chromosomes, genes, hormone levels, and reproductive/sexual anatomy, whereas gender is how we perceive ourselves and each other, and refers to socially constructed roles, behaviours, and expressions. Historically, in research the majority of animal studies have been performed on male rodents, and sex of cell lines are not ordinarily considered. In humans, women have been underrepresented in clinical trials, due partly to the concerns that menstrual cycles would contribute variability and, in some cases, that a woman's reproductive health would be affected. When women

have been included, sex-specific analysis were rarely considered, as the assumption was that women were basically "smaller men". Taken together, these issues have resulted in a large gap in understanding biological sex differences in symptoms, diagnosis, and treatment of disease.

Some examples of sex differences and gender bias:

- Heart disease tends to be thought of as a man's disease even though it is the most common cause of death in women in the United States and the second most common cause of death in Canadian women.
- Osteoporosis, typically considered a woman's disease, is the cause of hip fracture in 1 in 3 men and outcomes in males tend to be worse.
- Gender bias prevails in the mental health world where men tend to manifest depression as anger rather than withdrawal.
- There is a move towards personalized medicine which takes into account genetics, but surprisingly, X and Y chromosomes are often excluded from study.
- An important consideration in research in children is gender identity and its effect on mental health. Research is showing that children have a surprisingly secure sense of their own gender, whether the child identifies as transgender or not from a very early

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Featured Child Health Researcher

Dr. Amanda Froehlich Chow

Dr. Amanda Froehlich Chow is a Postdoctoral Fellow in the Canadian Centre for Health and Safety in Agriculture (CCHSA) working with Dr. Debra Morgan. Amanda completed her Master's of Science in the College of Kinesiology and PhD in Department of Community Health and Epidemiology at the University of Saskatchewan. As a Métis woman from rural Saskatchewan Amanda is particularly passionate about improving the health of those living in rural and remote communities. As such, she is developing streams of research among two population groups (older adults with dementia and children) living in rural and remote communities throughout Saskatchewan.



In 2014 Dr. Froehlich Chow was awarded a two-year Postdoctoral scholarship and named the top Socio-Health Postdoctoral Fellow from the Saskatchewan Health Research Foundation (SHRF). Amanda's SHRF funded Postdoctoral research was completed in the

College of Kinesiology where she worked with Dr. Louise Humbert to develop a physical activity and physical literacy focused intervention supporting rural early childhood educators to improve their own physical literacy and physical activity levels; in turn enhancing their ability to provide early years children with opportunities to develop their own physical literacy. This intervention was part of a larger project Health Start/ Départ Santé which aims to support early years' educators and parents in providing physical activity and healthy eating opportunities for early years children. Amanda is also involved in research lead by Dr. Carol Henry (College and Pharmacy and Nutrition) which aims to increase pulse crop consumption among preschool and school aged children, their families, and teachers.

Dr. Froehlich Chow looks forward to continuing her research in the CCHSA and College of Medicine. She hopes to expand collaborations with her colleagues across campus and throughout the province with the goal of improving the health of rural and remote residents in Saskatchewan.

Dr. Amanda Froehlich-Chow is a Postdoctoral Fellow in the Canadian Centre for Health and Safety in Agriculture, College of Medicine.

Our Partners:

The Jim Pattison Children's Hospital has historically provided strong support for child health research in Saskatchewan. The recent \$50 million donation from Jim Pattison allows for a steady stream of revenue to help meet research and programming needs for generations to come. Groundbreaking opportunities for pediatric researchers in Saskatchewan are on the horizon!



Clinical Investigator Program (CIP) for Residents

The CIP at the University of Saskatchewan is available to residents enrolled in a Royal College accredited residency program who have interest and potential for a career as a clinician investigator or clinician scientist. CIP offers two streams: A Graduate stream for participants enrolled in a graduate (M.Sc. or Ph.D.) program, and a Postdoctoral Stream for residents who already hold a Ph.D. and are interested in undertaking a structured research program. For further information about CIP, please contact Dr. Alan Rosenberg, alan.rosenberg@usask.ca.

relationships, and access to safe spaces where they feel respected and like they belong. When we take the time to talk with young people, we learn some surprising things. We heard time and again how much pets make kids happy and relieve stress.”

UNICEF Canada is working to develop a Canadian Index of Child and Youth Well-Being, one of the key initiatives of its soon-to-launch [One Youth](#) movement. One Youth will also host a Design Studio to work with children and youth to develop and test innovative solutions to the challenges they identify, and encourage public engagement around the challenge.

“We want Canada to become the best place to grow up in by 2030,” said Truesdell. “One of the ways to get there is by continuing to involve children and young people in our work to develop new ways to measure child well-being, that are more in line with what children and youth are actually telling us about their own lived experiences as well as the evidence we have about what supports well-being. Some communities are very good at doing that, but the data is very limited.”

One Youth is set to launch this fall. To learn more, visit www.unicef.ca/oneyouth.



This article was reprinted with permission from [UNICEF Canada blog](#), where you can find the full report, or contact erin.loose@usask.ca for a copy.

Resident Research Project Opportunities

“Relationship of ESR & CRP with inflammatory cytokine biomarkers”

Study format: Database analysis

Contact: Dr. Alan Rosenberg, alan.rosenberg@usask.ca

“Sex and gender influences on pediatric research participation”

Study format: Survey

Contact: Dr. Erin Prosser-Loose, erin.loose@usask.ca

Child Health Research Writing Group: The Department of Pediatrics is inviting anyone who wants to get out of their office and have a space to come and get some writing done (manuscripts, grants, etc). This idea seems to work well as being in the company of other people who are writing can help minimize distractions and improve focus. This also provides an opportunity to bounce ideas off of other people.

Contact erin.loose@usask.ca for information on dates and location.

We would appreciate your opinion about the Department of Pediatrics Research Report and suggestions for future editions.

Please complete a brief survey at:

<https://www.surveymonkey.com/s/NQVV6SB>.

Thank you!

Coming Events

OCT MON 2	Pediatrics Division of Research Mtg 11am-12pm E-4254 Health Sciences	OCT WED 4	Mingling Minds Seminar Series 4:15-5:30pm University Club RSVP erin.loose@usask.ca	OCT THU 5	Updates in Pediatric Transfusion Medicine Dr. Oksana Prokopchuk-Hauk Pediatric Grand Rounds 11am-12pm East Lecture Thtr	OCT THU 12	Social Pediatrics Dr. Maryam Mehtar Pediatric Grand Rounds 11am-12pm East Lecture Thtr	OCT FRI 13	CoM Fall Poster Day 12:30-3:30pm HSc D-Wing Atrium
OCT THU 19	Problems in Pediatric Laboratory Medicine Dr. Martha Lyon Pediatric Grand Rounds 11am-12pm East Lecture Thtr	OCT THU 26	The CHILD Study Dr. Pishkumar Mandhane Pediatric Grand Rounds 11am-12pm East Lecture Thtr	OCT FRI 27	Synchrotron for Pediatric Research Mtg Pediatric Faculty only 11:00am-1:00pm CLS, Room TBA	NOV THU 2	Infectious Disease Update Dr. Ben Tan Pediatric Grand Rounds 11am-12pm East Lecture Thtr	NOV THU 2	SPRING Meeting 4:15-6:45pm University Club RSVP erin.loose@usask.ca
NOV THU 9	Working with Children with Cystic Fibrosis Bruce Holmes Pediatric Grand Rounds 11am-12pm East Lecture Thtr	NOV THU 16	Child Aggression and Behavioural Challenges Declan Quinn Pediatric Grand Rounds 11am-12pm East Lecture Theatre RUH	NOV THU 23	Morbidity and Mortality Pediatric Grand Rounds 11am-12pm East Lecture Theatre RUH	NOV THU 30	Rheumatology Mehul Jariwala Pediatric Grand Rounds 11am-12pm East Lecture Theatre RUH		

Recent Publications & Presentations from U of S Child Health Researchers

- Ahmed A, Bowen A, Feng CX. *Maternal depression in Syrian refugee women recently moved to Canada: a preliminary study*. BMC Pregnancy Childbirth. 2017;17:240.
- Dmytrowich J, Holt T, Schmid K, Hansen G. *Mechanical ventilation guided by electrical impedance tomography in pediatric acute respiratory distress syndrome*. J Clin Monit Comput. 2017; [Epub ahead of print].
- Erlandson M, Runalls SB, Jackowski SA, Faulkner RA, Baxter-Jones ADG. *Structural strength benefits observed at the hip of premenarcheal gymnasts are maintained into young adulthood 10 years after retirement from the sport*. Pediatr Exerc Sci. 2017; [Epub ahead of print].
- Hansen G, Simerpreet B, Schellenberg KL, Alcock S, Ghrooda E. *Prehospital management of acute stroke in rural versus urban responders*. J Neurosci Rural Pract. 2017;8:33-36.
- Kitzman DW, Haykowsky MJ, Tomczak C. *Making the case for skeletal muscle myopathy and its contribution to exercise tolerance in heart failure with preserved ejection fraction*. Circ Heart Fail. 2017;10.
- Sari N, Muhajarine N, Froehlich-Chow A. *The Saskatchewan/New Brunswick Healthy Start - Départ Santé intervention: implementation cost estimates of a physical activity and healthy eating intervention in early learning centers*. BMC Health Serv Res. 2017;17:57.
- Skappak C, Ilarraza R, Wu YQ, Drake MG, Adamko DJ. *Virus-induced asthma attack: the importance of allergic inflammation in response to viral antigen in an animal model of asthma*. PLoS One. 2017;12:e0181425.
- Waespe N, Dhanraj S, Wahala M, Tsangaris E, Enbar T, Zlateska B, Li H, Klaassen RJ, Fernandez CV, Cuvelier GDE, Wu JK, Pastore YD, Silva M, Lipton JH, Brossard J, Michon B, Abish S, Steele M, Sinha R, et al. *The clinical impact of copy number variants in inherited bone marrow failure syndromes*. NPJ Genom Med. 2017;2.
- Ward S, Blanger M, Donovan D, Vatanparast H, Muhajarine N, Engler-Stringer R, Leis A, Humbert ML, Carrier N. *Association between childcare educators' practices and preschoolers' physical activity and dietary intake: a cross-sectional analysis*. BMJ Open. 2017;7.

Progress from the Past

John Dolan was born in Quebec in 1915. He came to Girvin, Saskatchewan with his parents at the age of three and was brought up on the farm where he started farming in 1938. He married Lena Moulton of Wynyard in 1936, and 3 years later, after the start of the Second World War, he tried to enlist in The Royal Canadian Air Force, but was turned down for health reasons. He worked in an aeroplane factory instead until 1943, when he returned to the farm in Girvin as his father was ill.



Because he and Lena had such a happy family, they were asked in 1948 to provide a foster home for a 2 year old girl, Norma, who was intellectually disabled due to influenzal meningitis. John quickly realized that Norma was not benefitting from ordinary schooling and through consulting with Fred McKinnon, the Director of Special Education of the Saskatoon School Board, and other parents, helped to form and presided over the Council for Retarded Children in 1955.

In April of that same year a pilot classroom for intellectually disabled children was opened in North Park School, eventually followed by the first John Dolan school on Kilburn Avenue. To this was later attached a sheltered workshop to which the children could graduate once they left school. Eighteen years later, in 1977, the children moved to the present John Dolan School on Arlington Avenue.

John helped to establish a chromosome laboratory in the Department of Pediatrics, which would become the Department of Medical Genetics at Royal University Hospital, and then encouraged the development of a comprehensive unit for the evaluation and care of the intellectually disabled. A crusade, across Canada, to collect money for the cause was undertaken, and was spearheaded in Saskatchewan by Senator Sid Buckwold, former mayor of Saskatoon, Sandy Nicholson, a former Provincial Minister of Health, and by Dr. John Gerrard, head of the Department of Pediatrics. The funds raised made it possible to establish the Alvin Buckwold Center, and in 1967 Dr. Wiltold Zaleski, was appointed Director. Both John Dolan and Senator Buckwold were active members of its board. Senator Buckwold was its first chairman and played a crucial role in ensuring the permanent financial support for the Centre.

John Dolan was faced with a challenge and rose to the occasion, and by so doing, brought and continues to bring untold happiness to families throughout Saskatchewan.

This information is on display at the Kinsmen Children's Centre.

Sex and Gender

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age. Children who make the social transition at a young age and are supported, appear to have strong mental health and self-esteem as compared to individuals who transition later in life and who tend to face depression, anxiety, and rejection.

There is now increasing impetus to address sex and gender issues in health research, which will hopefully lead to improved equity in prevention and treatment strategies. In 2010, the CIHR began asking applicants to indicate whether sex and gender were accounted for in their proposals, and now CIHR requires applicants to integrate sex and gender based analysis (SGBA) into their research when appropriate, and to provide justification when it is not. SGBA is defined by CIHR as "an approach that systematically examines sex-based (biological) and gender-based (socio-cultural) differences between men, women, boys, girls and gender-diverse people. The purpose of SGBA is to promote rigorous science that is sensitive to sex and gender and therefore has the potential to expand our understanding of health determinants for all people."

Researchers can find information and resources relating to sex and gender in research on the CIHR website (Sex, Gender, and Health Research Guide: A Tool for CIHR Applicants; <http://www.cihr-irsc.gc.ca/e/32019.html>). Resources are available for all four CIHR pillars (biomedical, clinical, health systems and services, and population health), and include training modules, fact sheets, videos, webinars, articles, and reports. Also very helpful are gender measurement instruments to assess gender identity, gender roles, gender norms, and gender relations, all of which can be used to collect gender information in surveys.

In addition to tackling sex and gender issues in health through application requirements, CIHR is also performing an ongoing analysis of gender across its funding programs, which has thus far revealed: 1) gender inequities in success rates of certain competitions (specifically among mid to senior career investigators for the Foundation Grant program, and within the Training Awards); 2) gender differences in the amounts of funding approved. This difference disappears when comparing "approved" to "requested"; however, this suggests that women are asking for less than men, which is in itself a concern; and 3) gender inequities in the broader health research enterprise, specifically showing fewer women faculty as rank increases from assistant to associate to full professor.

In summary, researchers must begin to contemplate sex and gender issues in their own research, and in the workplace as well. Several resources exist to address problems, which will lead to better science, equity in treatments of disease, and richer research and health environments.

If you are interested in learning more about sex and gender in research, and/or would like to be added to an email list for future initiatives around this, please contact erin.loose@usask.ca.

Visit <http://www.cihr-irsc.gc.ca/e/32019.html> for more information and resources.

contact us

For more information about The Department of Pediatrics Research, SPRING, or to contribute content to The Department of Pediatrics Research Report, please contact:

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Next submission deadline is Nov 10th, 2017!

Online version of the newsletter:
www.medicine.usask.ca/pediatrics/research/newsletter



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The Children's Health Research Trust Fund (CHRTF) was established in 1983 to help raise funds to support child health research at the University of Saskatchewan. As all donated funds are endowed, the CHRTF has continued to grow to become an important partner in helping advance research in the Department of Pediatrics. For further information about the CHRTF: <http://www.medicine.usask.ca/pediatrics/research/CHRTF>. To **Donate** to the CHRTF: <http://give.usask.ca/online/chrtf.php>

