

## TOP 10 TOPICS:

- NUTRITION
- PREMATUREITY
- YOUTH HEALTH
- STRESS
- BREASTFEEDING
- AND MUCH MORE...



## CANADIAN EARLY CHILDHOOD DEVELOPMENT RESEARCH HAS GONE... INTERNATIONAL!

BY RICHARD E. TREMBLAY AND MICHEL BOIVIN

This is the 12<sup>th</sup> edition of the Top Ten Bulletin series (started in 2002) to highlight the best recent research publications on early childhood development co-authored by at least one Canadian investigator. The ten papers were selected from 78 papers in high-impact international journals during 2013-14 and were ranked by 18 Canadian clinicians and researchers who were blind to the authors. The papers cover a wide spectrum of ground-breaking research, focusing on premature birth, child mortality, perinatal maternal mortality, obesity, asthma, allergies and brain development. Many of the papers investigate causes leading to these problems, including genetics, epigenetics, poverty, stress during pregnancy and child abuse.

The majority of our experts selected as the most important an article on children's death before age five around the world. The results of this huge international research enterprise funded by the Bill & Melinda Gates Foundation, the Aga Khan University and the Toronto Hospital for Sick Children show the Herculean work needed to substantially reduce that death rate. International experts estimated that a meagre 15% of the 3.1 million children under age five who die annually could be saved, even if the most effective interventions were implemented with 90% coverage.

The striking and somewhat surprising commonality among the ten papers summarized here is their international scope. **If there is any doubt that research on human development is a worldwide playing field, this issue of our Top Ten should help convince – and worry – the sceptics!** For example, only two of the first authors of the ten papers are affiliated with a Canadian university.

Hannah Schreier is one of the two – and a good example of the international scope. Schreier came to Canada from Germany as a high-school exchange student, did her undergraduate work at McGill University and her PhD at University of British Columbia under

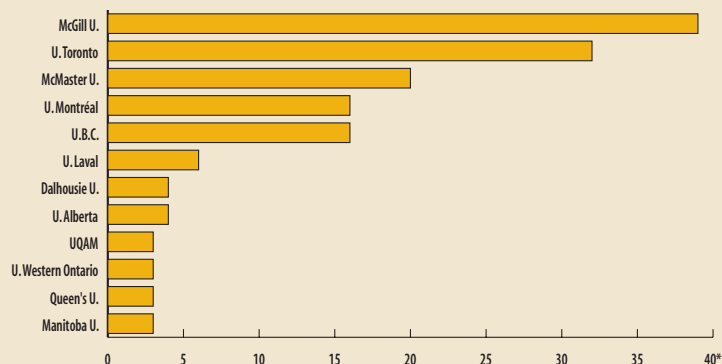
Edith Chen, an American who was Canada Research Chair in Health and Society when the paper was published and who has now moved back to the United States. Their literature review on environmental conditions associated with asthma and obesity (see p. 3) eventually led Schreier to a postdoctoral position in New York and an academic position at Pennsylvania State University. The first authors

of the other eight papers are from England, Germany (2), Pakistan, Scotland, Singapore and the US (2).

Another unexpected and somewhat disturbing outcome of the 2013-14 Top Ten selection is that **none of the studies were done in Canada!** From the eight studies mentioned above, two included Canadian data because they were two of three using national statistics worldwide. The other six publications reported results from data collected in Australia, Belarus, Scotland, Singapore and the US (2). Interestingly, three of these six studies were large birth cohorts from Australia, Belarus and Singapore.

We have never before analysed our Top Ten selection from an international perspective. The surprising results from 2013-14 appear to indicate that investigators in early child development from Canadian universities involved in international studies are the most productive from the perspective of high-impact journal publications. This is likely because the most productive researchers from Canadian universities are those invited to be part of international collaborations. But, the following question remains: **Why are Canadian studies not part of these international collaborations,** at least in 2013-14? We will follow up with a longer-term analysis in our next bulletin. 🦋

## TOP 120 PAPERS (2001-2014)



\* Number of papers with at least one author from a Canadian institution.  
Only shown in this graph, those with at least three publications in the top 120 (2001-2014).