THE HEALTHY IMMIGRANT EFFECT IN CANADA: A SYSTEMATIC REVIEW

Zoua M. Vang
Jennifer Sigouin
McGill University

Astrid Flenon
Alain Gagnon
Université de Montréal

Conference on Population Change and Life Course: Taking Stock and Looking to the Future
19-20 March 2015, Ottawa
Healthy Immigrant Effect (HIE)

- Immigrants healthier than non-migrants in sending country and native-born population in receiving country

- HIE observed in USA, Western Europe, Australia, and Canada

Goals of project:
- Examine extent of HIE in immigrant-receiving countries for select health outcomes (meta-analysis)
- Assess HIE across different life-course stages and health outcomes in Canada
Why Are Immigrants Healthier?

- Immigrant health selection
  - Self
  - State

- Acculturation

- Other post-migration (negative) exposures and experiences
The Canadian Context

- Self-selection

- State selection:
  - Point system: high human capital ~ better health
  - Medical exam

- Prior research shows:
  - Foreign-born (adult) health advantage
  - Health advantage disappears the longer immigrants are in Canada
Methodology

- Systematic review
- Published studies: 1980-2014 (French and English)

Search engines:
- PubMed
- Medline
- Embase
- Global Health
- SOC Index
- JSTOR
- Clinical Key

Study inclusion criteria:
- Quantitative
- Original research articles w/ explicit FB vs CB comparison

Dependent variables:
- mortality,
- self-rated general health
- mental health
- chronic conditions
- functional limitations/disability
- risk behaviors
- perinatal health
- child/adolescent health
Methodology, cont’d

N=75 eligible studies

- Divide studies by:
  - Life-course stage
  - Health outcome

- Analysis:
  - For each study, assess whether FB had Better, Worse, or Similar health relative to CB
  - Mixed → FB health (dis)advantage depends on sociodemographic & other characteristics
  - FB-CB comparisons based on adjusted point/parameter estimates (some unadjusted estimates)
Key Findings

- The healthy immigrant effect is not a universal phenomenon in Canada.

- Immigrants’ health advantage varies across the life-course, and within each stage of the life-course, by different health outcomes.

- The healthy immigrant effect appears to be strongest during adulthood but less so during childhood/adolescence and late life.

- A foreign-born health advantage is robust for mortality but less so for morbidity, with immigrants in Canada exhibiting a survival advantage over their Canadian-born counterparts.
Detailed findings across the life-course

- **Perinatal period (N=21)**
  - Birth outcomes → **Worse/Same**
    - PTB → **Better/Same**
    - PTB advantage disappears after 10 years
  - FB mothers → **Worse** maternal and mental health

- **Childhood/adolescence (N=7)**
  - Mental health, weight gain/obesity → **contradictory**
  - Risk behaviors → **Better** (alcohol, delinquency only)
Detailed findings across the life-course

- Late life (N=6):
  - Chronic conditions → Same
  - Mental health → Same
  - Self-rated health → Worse/Same
  - Disability/functional limitations → Worse
<table>
<thead>
<tr>
<th>Health Outcome</th>
<th>No. studies</th>
<th>Worse</th>
<th>Better</th>
<th>Similar</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic conditions (at least one)</td>
<td>9</td>
<td>✓✓✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓✓✓</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Asthma</td>
<td>3</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Cancer</td>
<td>3</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Cardiovascular/hypertension</td>
<td>3</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Overweight/obesity</td>
<td>4</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Disability/Functional limitations</td>
<td>10</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Mental health</td>
<td>10</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Risk behaviors</td>
<td>4</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
<tr>
<td>Self-rated health</td>
<td>16</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
<td>✓✓✓✓✓</td>
</tr>
</tbody>
</table>
Mortality (N=12)

<table>
<thead>
<tr>
<th>Health Outcome</th>
<th>No. studies</th>
<th>Worse</th>
<th>Better</th>
<th>Similar</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality, all-cause</td>
<td>9</td>
<td></td>
<td></td>
<td>✔️ ✔️ ✔️ ✔️</td>
<td></td>
</tr>
<tr>
<td>Cause-specific mortality:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidents, poisoning, violence</td>
<td>3</td>
<td>✔️ ✔️ ✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td>1</td>
<td></td>
<td></td>
<td>✔️ (w/s)</td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>2</td>
<td>✔️ ✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td>2</td>
<td>✔️ ✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>2</td>
<td>✔️ ✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious and parasitic diseases</td>
<td>1</td>
<td></td>
<td></td>
<td>✔️ (w/s)</td>
<td></td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>2</td>
<td>✔️ ✔️</td>
<td></td>
<td>✔️ (w/b) ✔️ (w/b)</td>
<td>✔️ (w/s)</td>
</tr>
<tr>
<td>Suicide</td>
<td>4</td>
<td>✔️ ✔️</td>
<td></td>
<td>✔️ (w/s)</td>
<td></td>
</tr>
<tr>
<td>Other(^1)</td>
<td>1</td>
<td>✔️ ✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Future Research Recommendations

- Premigration experiences
- Longitudinal analysis
- More research on early & late stages of life
- Further research on health selection effects
Policy Recommendations

- One-size-fits-all approach would be ineffective

- Policies and interventions need to target specific life-course stages and health outcomes for which immigrants are vulnerable
  - Eg: immigrant mothers
Thank you

Merci!