



# THE HEALTHY IMMIGRANT EFFECT IN CANADA: A SYSTEMATIC REVIEW

Zoua M. Vang  
Jennifer Sigouin  
McGill University

Astrid Flenon  
Alain Gagnon  
Université de Montréal

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# Healthy Immigrant Effect (HIE)

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- ▶ 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

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- ▶ **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

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- ▶ 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

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N=75 eligible studies

▶ **Divide studies by:**

- ▶ Life-course stage
- ▶ Health outcome

▶ **Analysis:**

- ▶ For each study, assess whether FB had **B**etter, **W**orse, or **S**imilar health relative to CB
- ▶ **M**ixed → FB health (dis)advantage depends on sociodemographic & other characteristics
- ▶ FB-CB comparisons based on adjusted point/parameter estimates (some unadjusted estimates)





# Key Findings

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- ▶ 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

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## ▶ Perinatal period (N=21)

- ▶ Birth outcomes → **W**orse/Same
  - ▶ PTB → **B**etter/**S**ame
  - ▶ PTB advantage disappears after 10 years
- ▶ FB mothers → **W**orse maternal and mental health

## ▶ Childhood/adolescence (N=7)

- ▶ Mental health, weight gain/obesity → contradictory
  - ▶ Risk behaviors → **B**etter (alcohol, delinquency only)
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# Detailed findings across the life-course

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- ▶ **Late life (N=6):**
  - ▶ Chronic conditions → **Same**
  - ▶ Mental health → **Same**
  - ▶ **Self-rated health** → **Worse/Same**
  - ▶ Disability/functional limitations → **Worse**





# Adult Health (N=34)

Health Outcome	No. studies <sup>2</sup>	COMPARISON OF FOREIGN-BORN VS NATIVE-BORN ADULTS (18-64) <sup>1</sup>			
		Worse	Better	Similar	Mixed
Chronic conditions (at least one) <sup>3</sup>	9		✓✓✓✓✓ <sup>u</sup>	✓✓ <sup>u</sup>	✓(b/s) ✓(b/s)
<i>Arthritis</i>	2	✓ <sup>u</sup>		✓	
<i>Asthma</i>	3		✓✓✓ <sup>u</sup>		
<i>Cancer</i>	3		✓✓✓		
<i>Cardiovascular/hypertension</i>	3		✓✓ <sup>u</sup>	✓	
<i>Diabetes</i>	3	✓✓ <sup>u</sup>		✓	
<i>Overweight/obesity</i>	4		✓	✓	✓(b/w) ✓(w/s)
Disability <sup>4</sup> /Functional limitations <sup>5</sup>	10	✓ <sup>u</sup>	✓✓	✓✓✓ <sup>u</sup>	✓(b/s) ✓(b/s) ✓(b/s) ✓(w/b)
Mental health <sup>6</sup>	10	✓	✓✓✓✓ <sup>u</sup> ✓ <sup>u</sup>	✓	✓(b/s) ✓(b/s) ✓(b/s)
Risk behaviors <sup>7</sup>	4		✓		✓(b/s) ✓(b/s) ✓(b/s)
Self-rated health <sup>3</sup>	16	✓✓ <sup>u</sup> ✓ <sup>u</sup>	✓	✓✓✓	✓(b/s) ✓(w/b/s) ✓(w/s) ✓(w/s) ✓(w/b) ✓(w/b)



# Mortality (N=12)

Health Outcome	No. studies	COMPARISON OF FOREIGN-BORN VS NATIVE-BORN PERSONS			
		Worse	Better	Similar	Mixed
Mortality, all-cause	9		✓✓✓✓✓ ✓✓✓✓		
Cause-specific mortality:					
Accidents, poisoning, violence	3		✓✓✓		
AIDS	1				✓ <sup>(w/s)</sup>
Cancer	2		✓✓		
Cardiovascular diseases	2		✓✓		
Diabetes	2		✓✓		
Infectious and parasitic diseases	1				✓ <sup>(w/s)</sup>
Respiratory diseases	2		✓✓		✓ <sup>(w/b)</sup> ✓ <sup>(w/b)</sup>
Suicide	4		✓		✓ <sup>(w/s)</sup>
Other <sup>1</sup>	1		✓		





# Future Research Recommendations

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





# Policy Recommendations

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- ▶ 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!

