

# **Life course origins of mental health inequalities in adulthood**

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# Inequalities in life expectancy

## Across the world



**82 yrs**



**37 yrs**

**47 yrs**

**57 yrs**

# Inequalities in life expectancy

## Within Canada



**82 yrs**



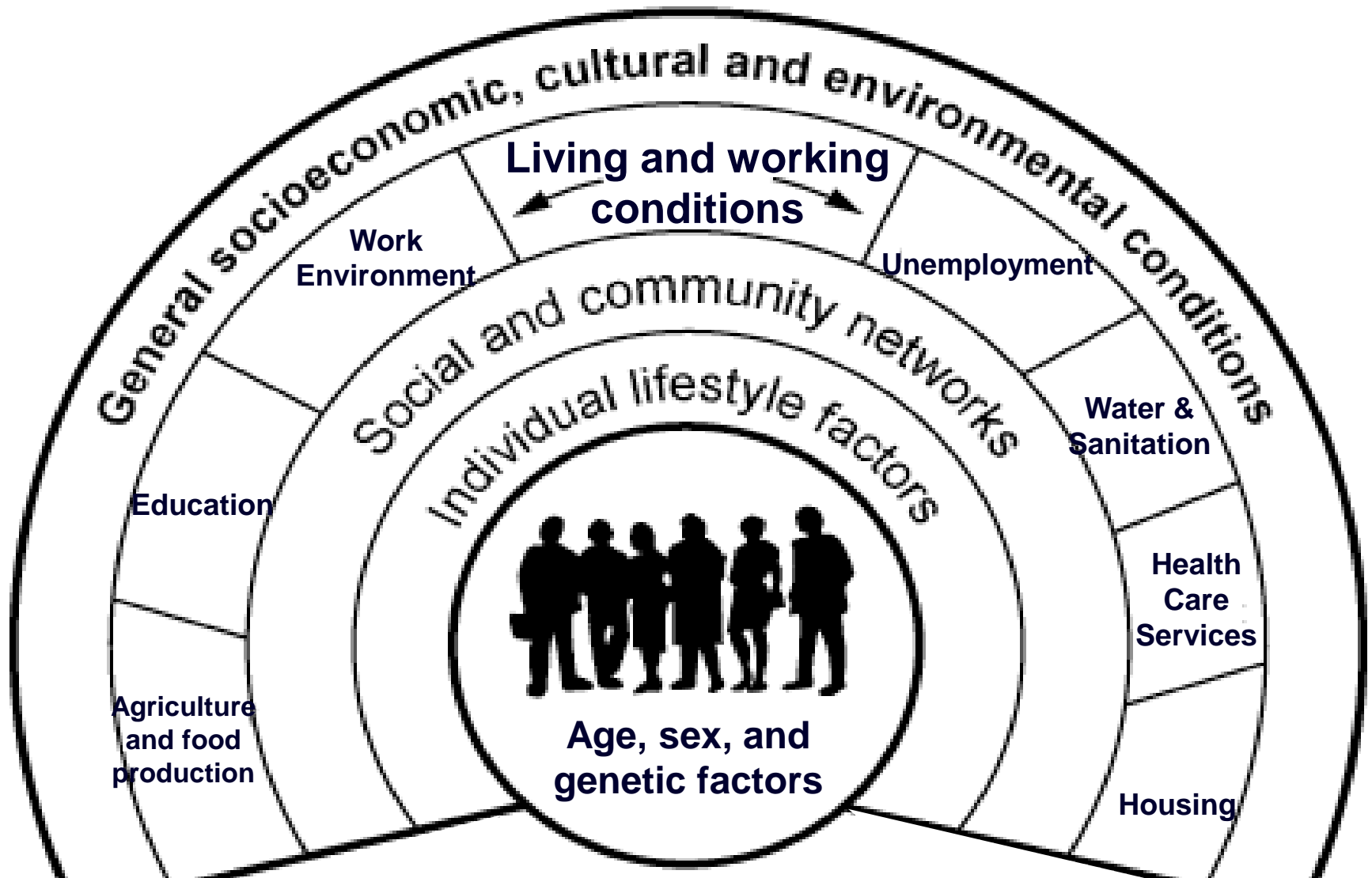
**♂ 69 yrs**

**♀ 77 yrs**

# **Inequities are killing people on a "grand scale"**

**Commission on Social Determinants of Health,  
World Health Organization**

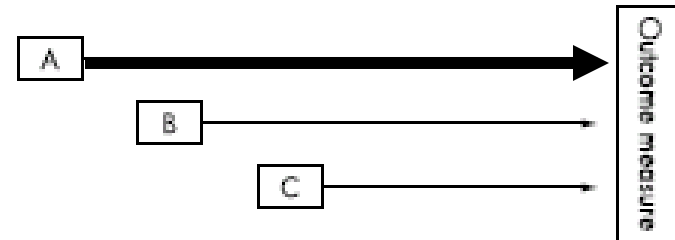
# The Social Determinants of Health



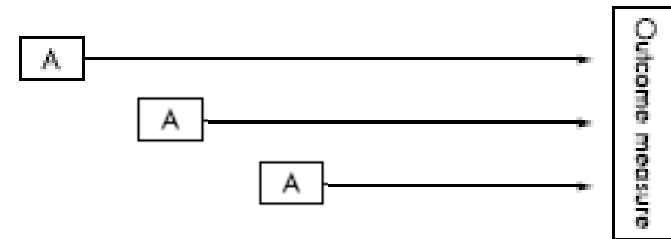
# **CAUSAL EXPLANATIONS IN LIFE COURSE EPIDEMIOLOGY**

# Life course causal models

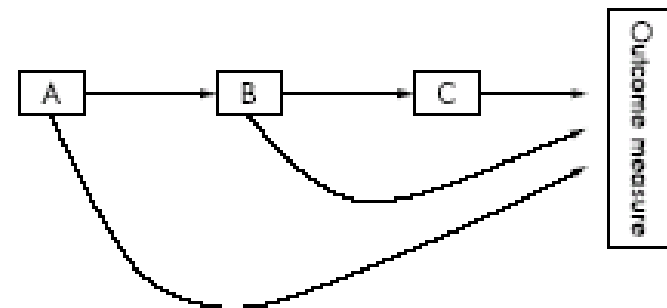
- Critical or Sensitive Period effects



- Cumulative effects



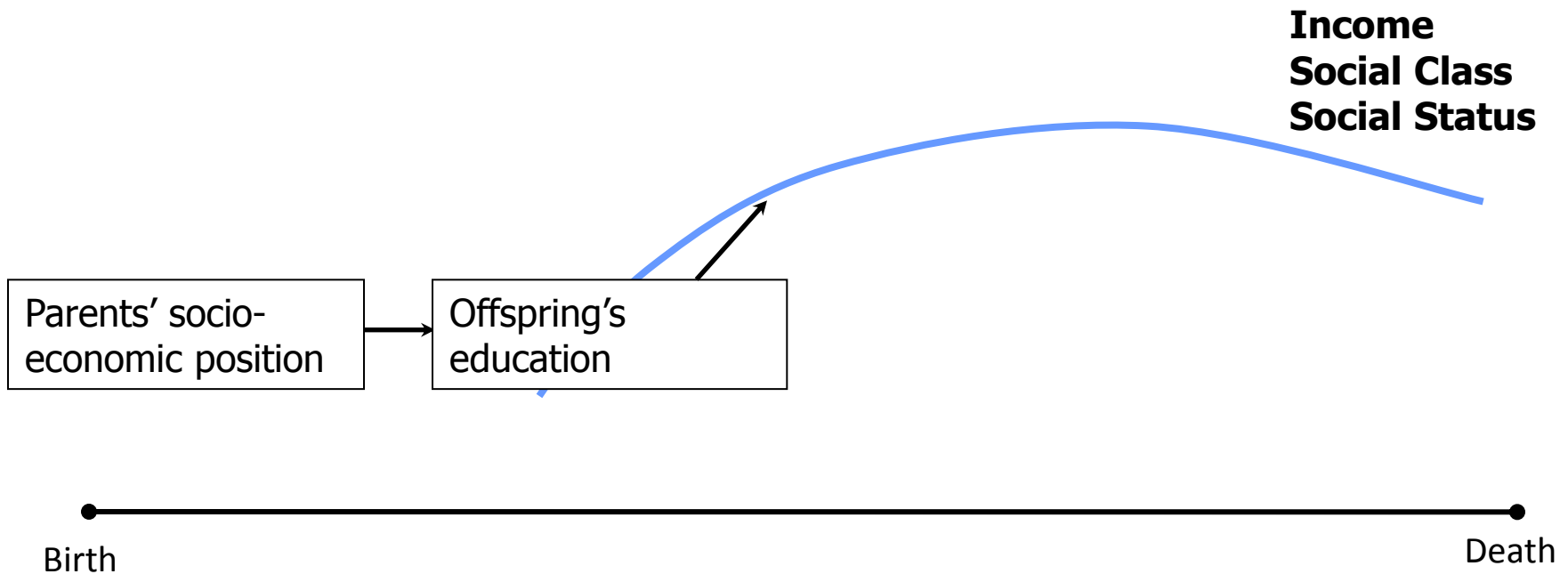
- Pathway effects



# **Life course processes of status attainment**

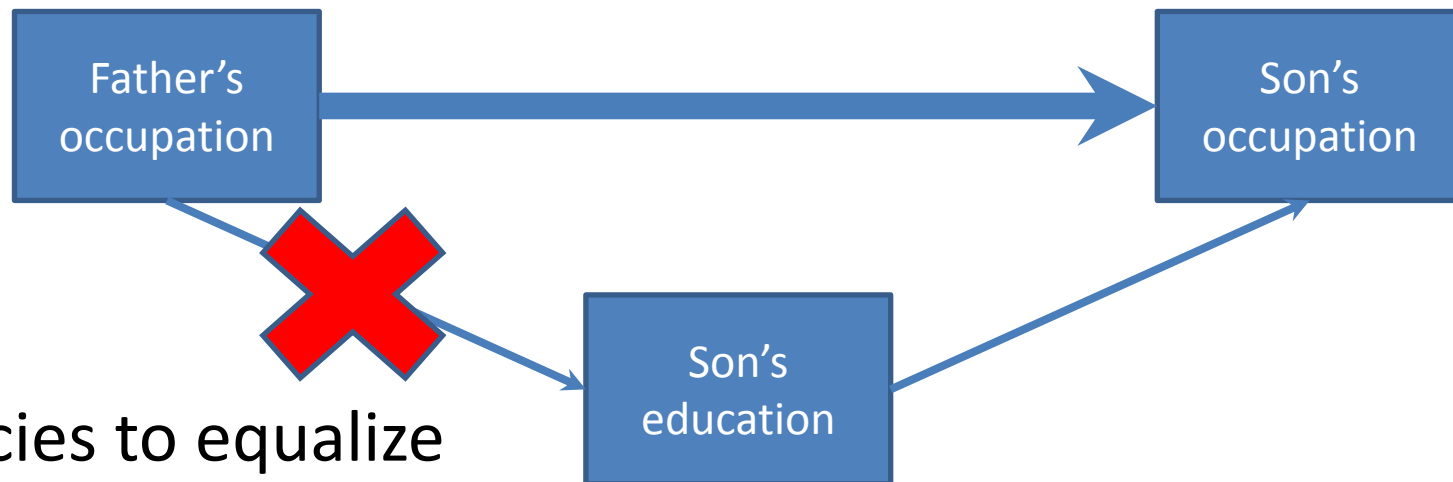


# Socio-economic position over the life course



# Intergenerational mobility

- 1967: Blau and Duncan. *The American Occupational Structure*



Policies to equalize  
educational opportunity

E.g. Quebec's universal educational daycare program

***Meeting Early Childhood Needs***

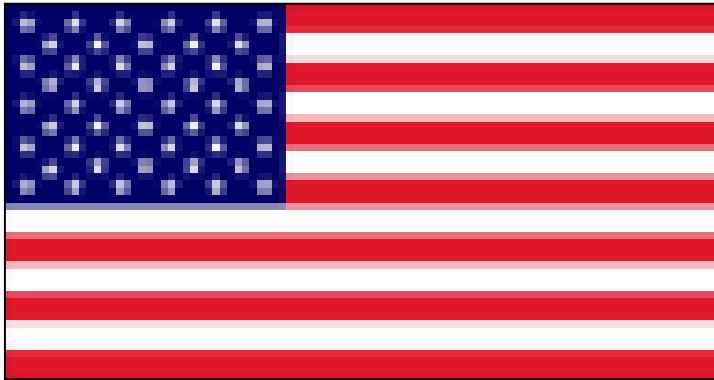
# Test scores by income in the US



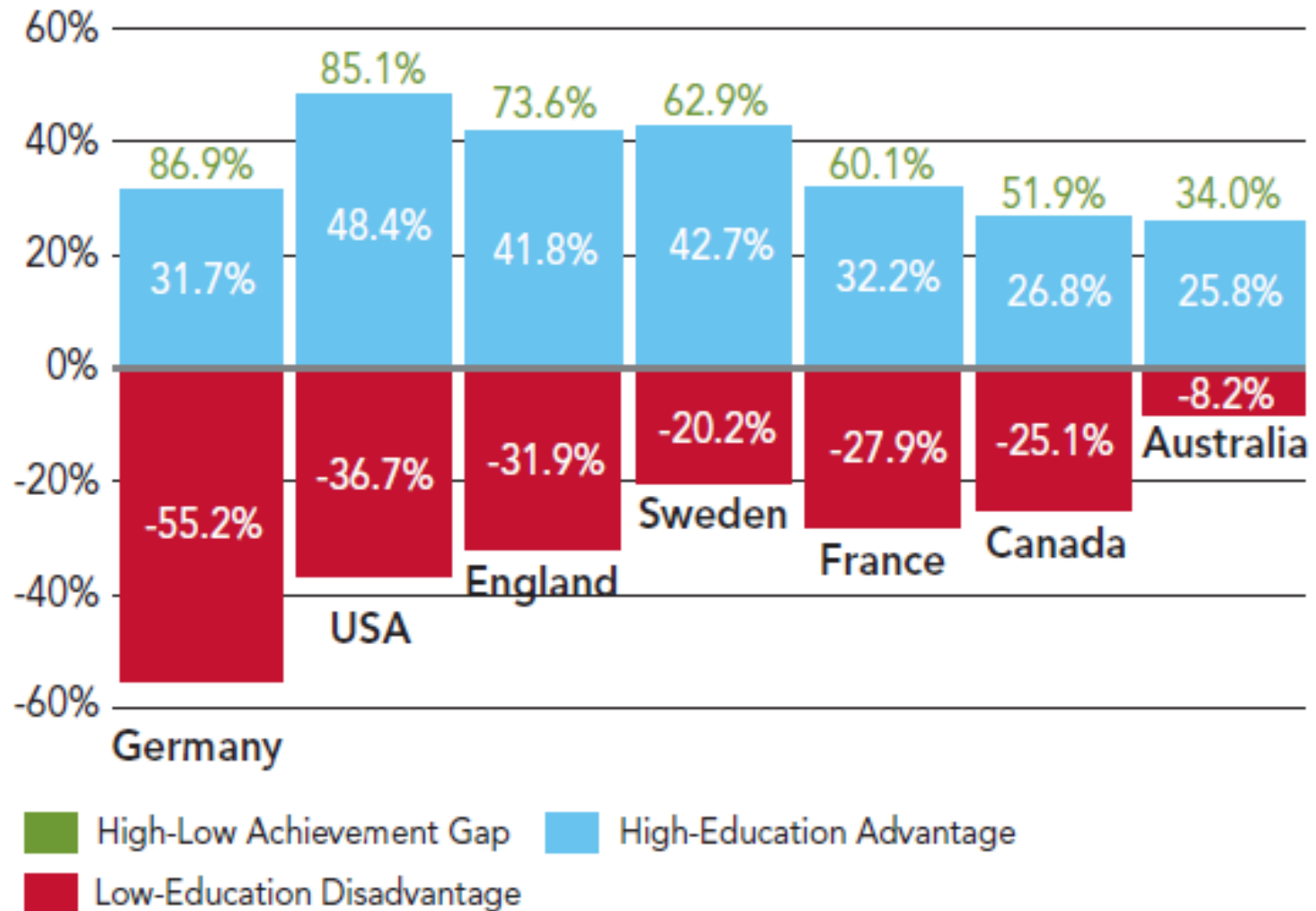
Source: <http://tinyurl.com/7sqr92f>;

Source: College Board

# Which country has the highest level of intergenerational inequalities?



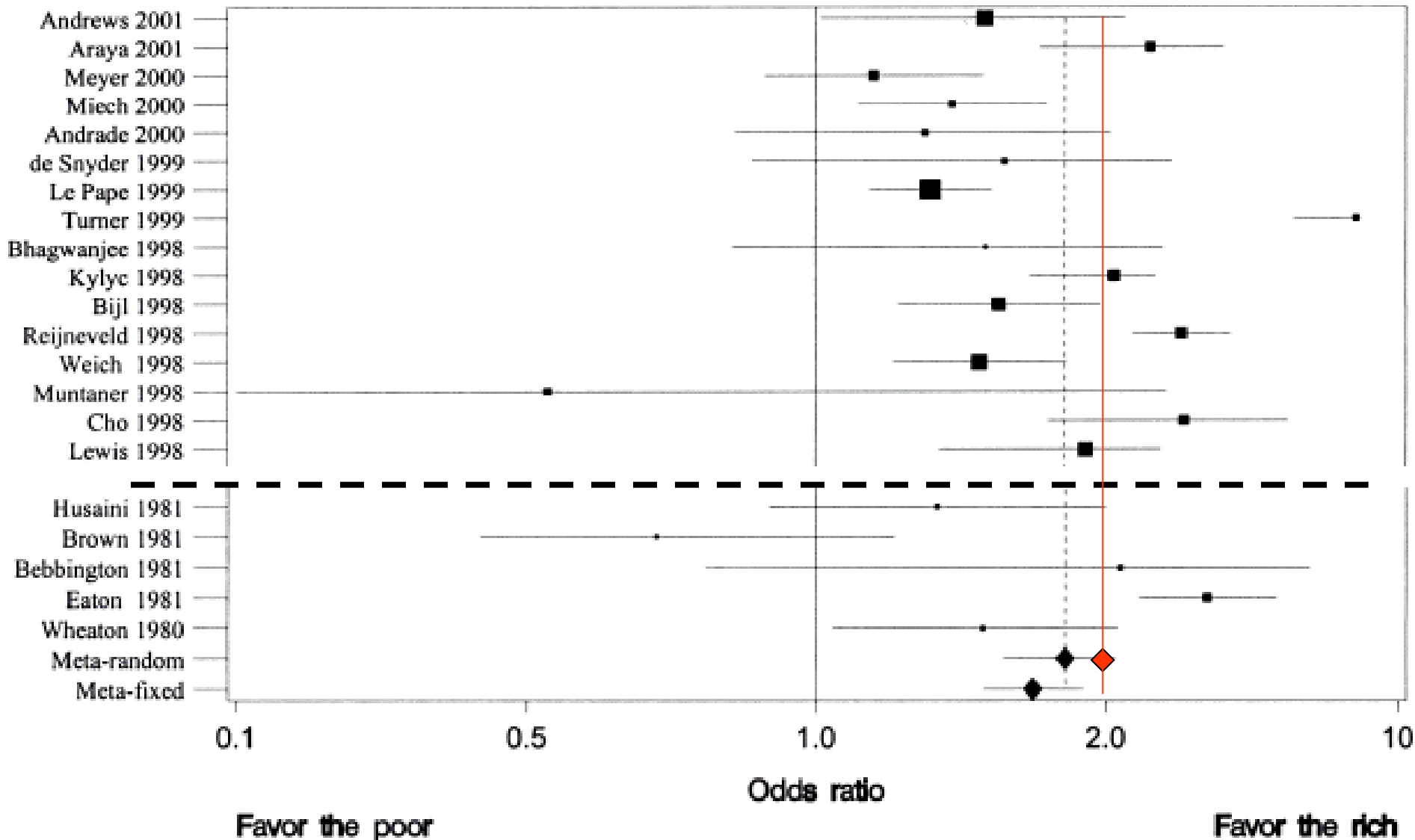
# International comparisons



# **Mental health across the life course**

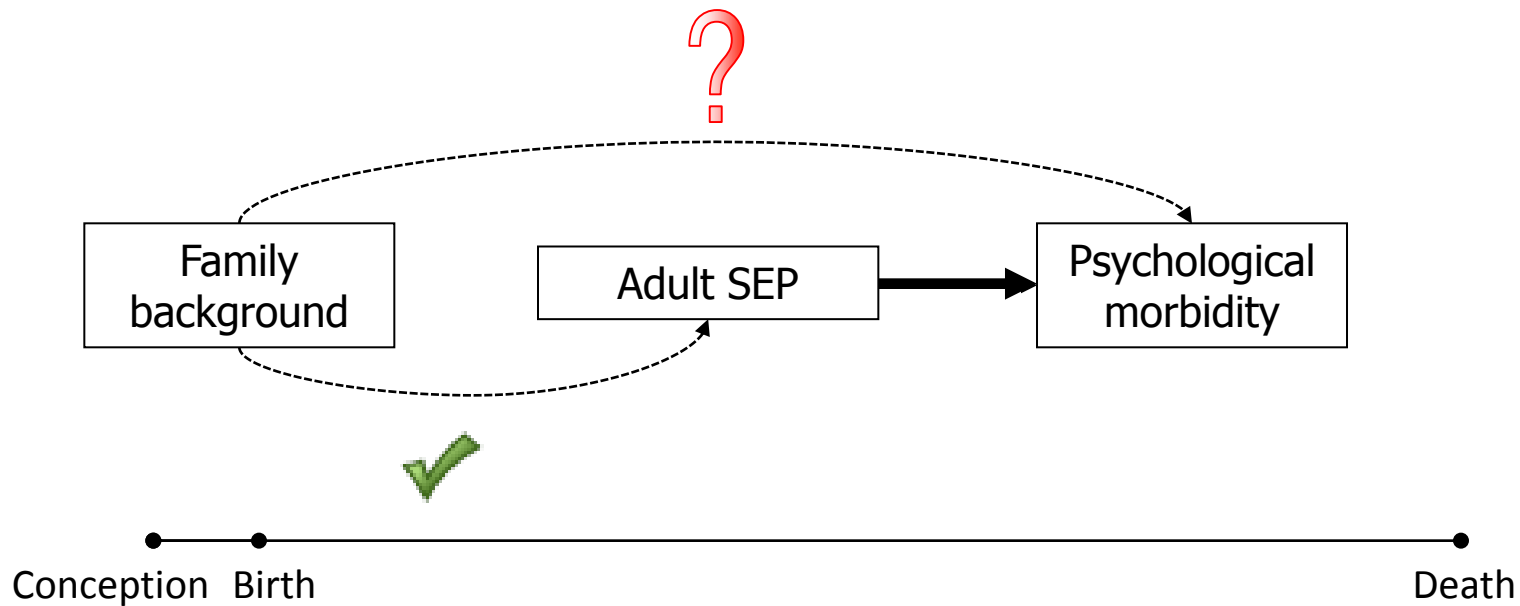
# Adult SEP and Depression

OR=1.81

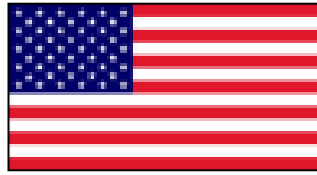


# Early SEP and adult mental health?

Power et al. 2004. *Soc. Sci and Med.*







# **Socioeconomic pathways to depressive symptoms in adulthood: Evidence from the NLSY79**

Amélie Quesnel-Vallée

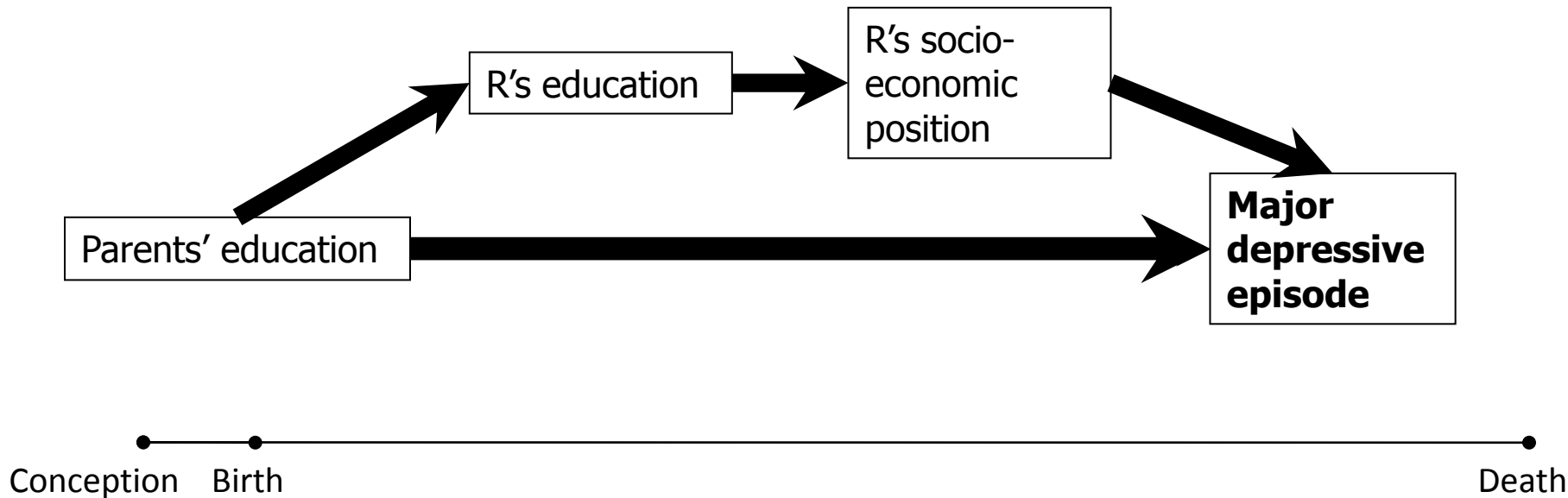
*McGill University*

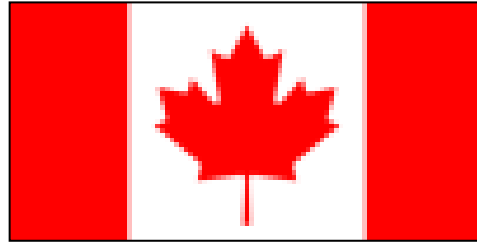
Miles Taylor

*Florida State University*

2012. *Social Science & Medicine* 74(5):734-43

# Causal model: Major depressive episode





# **Parents' education and the risk of major depression in early adulthood in Canada**

Alison L. Park

*Institut national de santé publique du Québec*

Rebecca Fuhrer

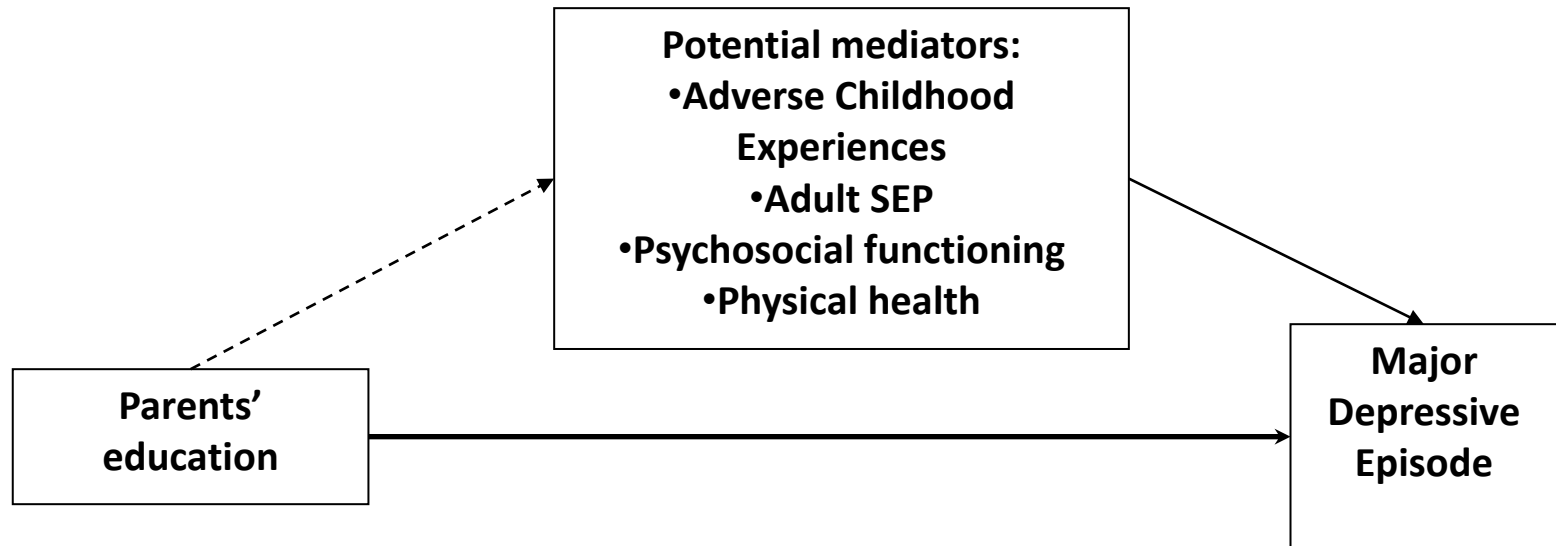
Amélie Quesnel-Vallée

*McGill University*

2013. *Social Psychiatry and Psychiatric Epidemiology*. 48:1829–1839

# Objectives

- To estimate the relationship between mother's and father's education and major depressive episode (MDE) of their adult child
- Estimate mediating effects of other risk factors

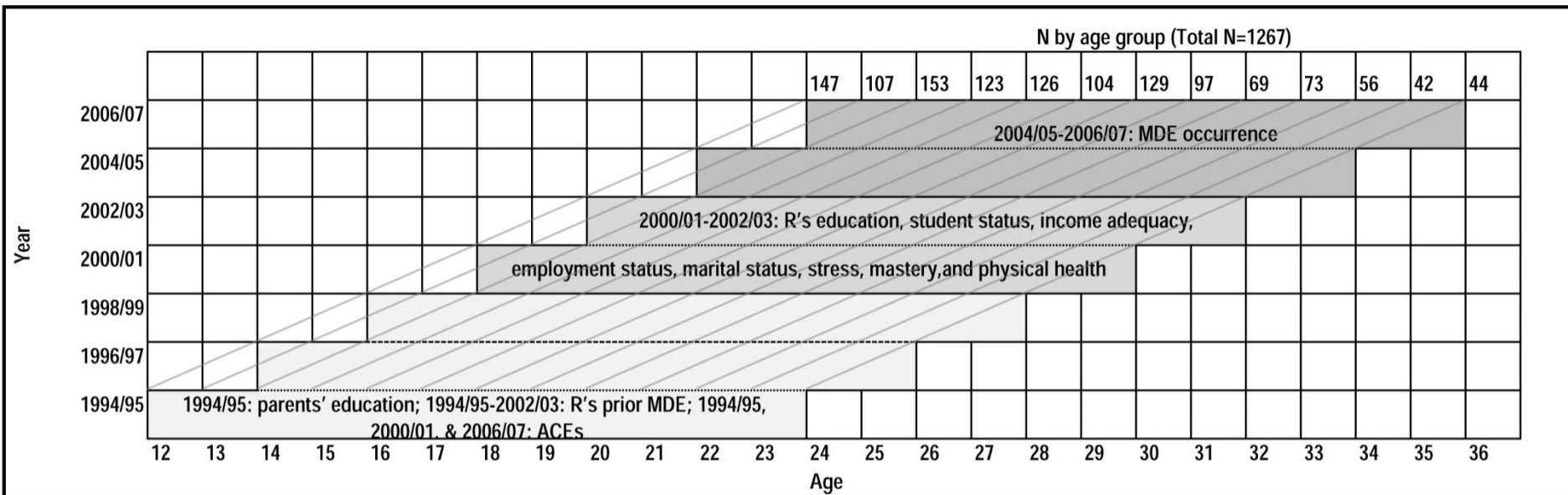


# Data and Sample

- **Survey: National Population Health Survey (NPHS), Statistics Canada**
  - Cycles 1-7: Biennial 1994/95 to 2006/07
- **Study population:**
  - 12 to 24 years-old and living with parent(s) in 1994/95
  - Baseline MDE: reported at least once between 1994/95-2002/03
  - ACEs: reported in 1994/95, 2000/01 or 2006/07
  - Follow-up MDE: reported in 2004/05 or 2006/07
  - Marital status, education, student status, income adequacy, employment status, chronic stress, mastery, and number of chronic conditions: reported in 2000/01 or 2002/03
- Total n=1267

# Design

- Structure of longitudinal design



# Variables

- **Early-life SEP** (mother's and father's education)
  - $\geq$  high school (ref.), < high school, or missing
- **Potential mediators:**
  - Early-life: ACEs (*Childhood and Adult Stress Index*)
  - Adult: SEP (education, student status, income adequacy, employment status), psychosocial functioning (*General Chronic Stress Index* and *Mastery Scale*), physical health (number of chronic conditions)
- **Control variables:**
  - Baseline MDE (met criteria for MDE in any of the first 5 waves, or diagnosed by a healthcare professional)
  - Sex, age, race, marital status
  - Parental history of depression (results not shown)

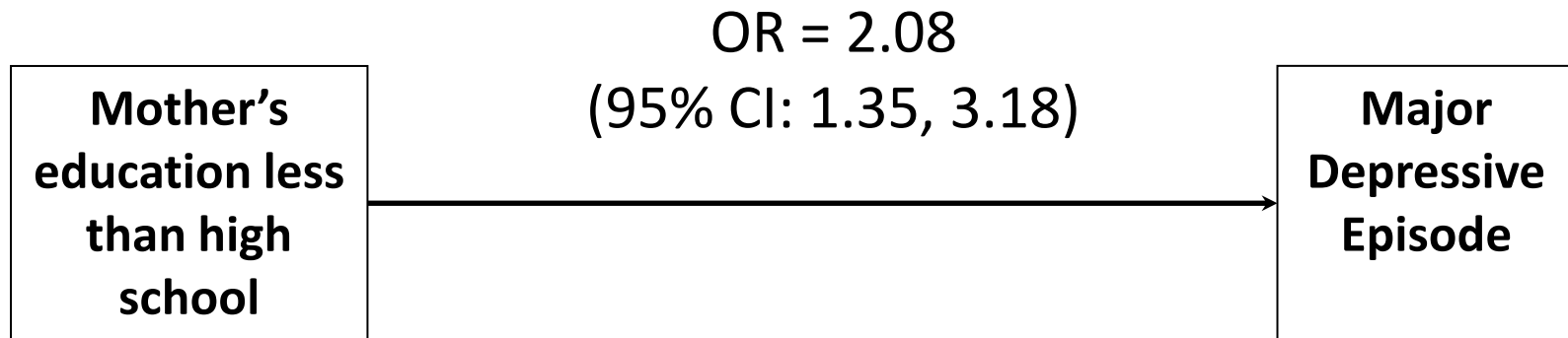
Which do you think will have the strongest effect on adult depression?

Mother's  
education

Father's  
education

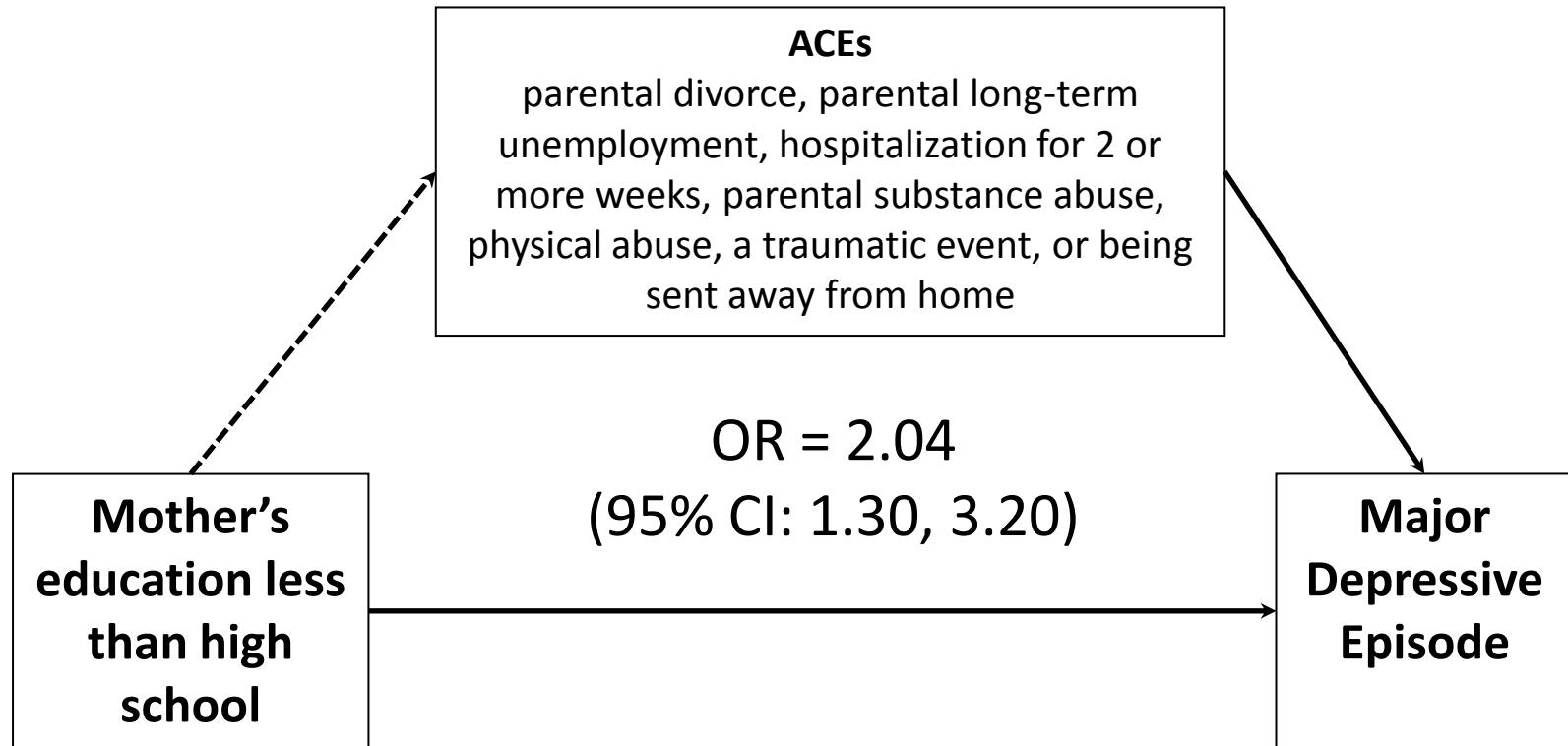


# **Mother's education: Lack of a high school diploma**



\*controlling for sex, age, ethnicity, marital status, prior MDE

# Adverse childhood events?

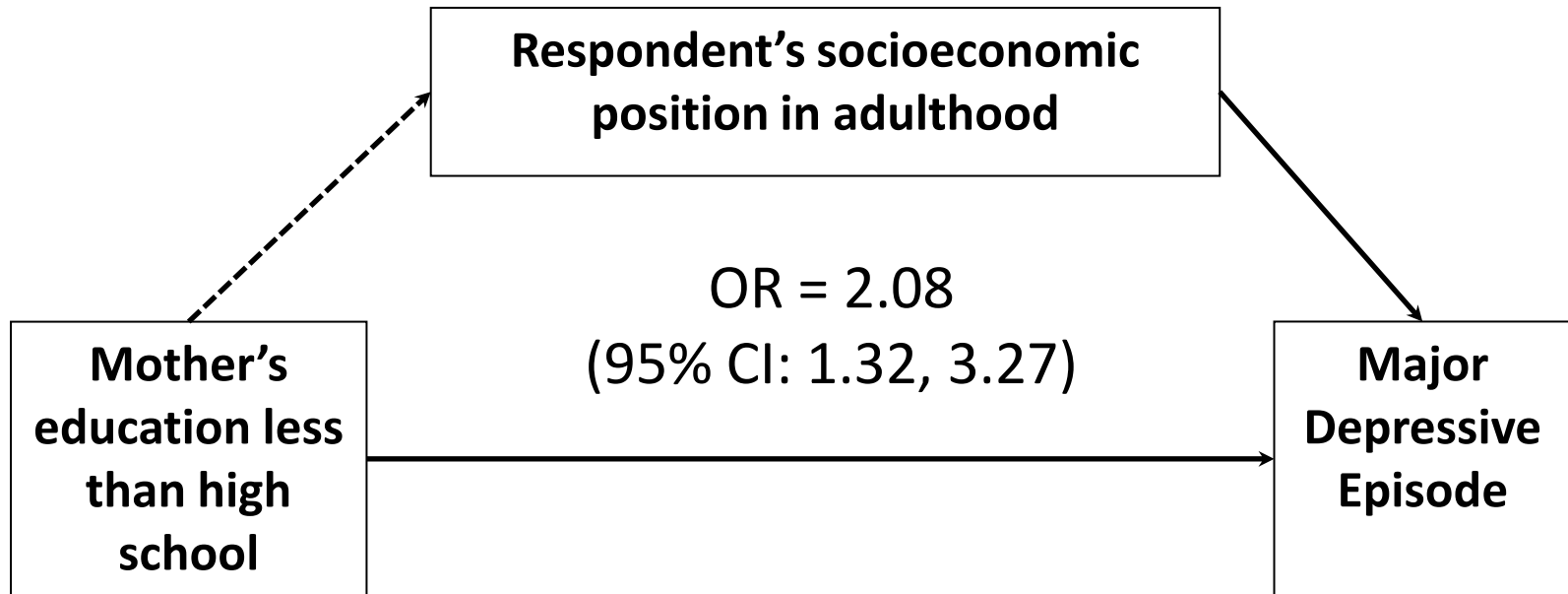


Model 1 estimates:

< HS: OR = 2.08 (1.35, 3.18)

\*controlling for sex, age, race, marital status, prior MDE

# Adult child's education and income?

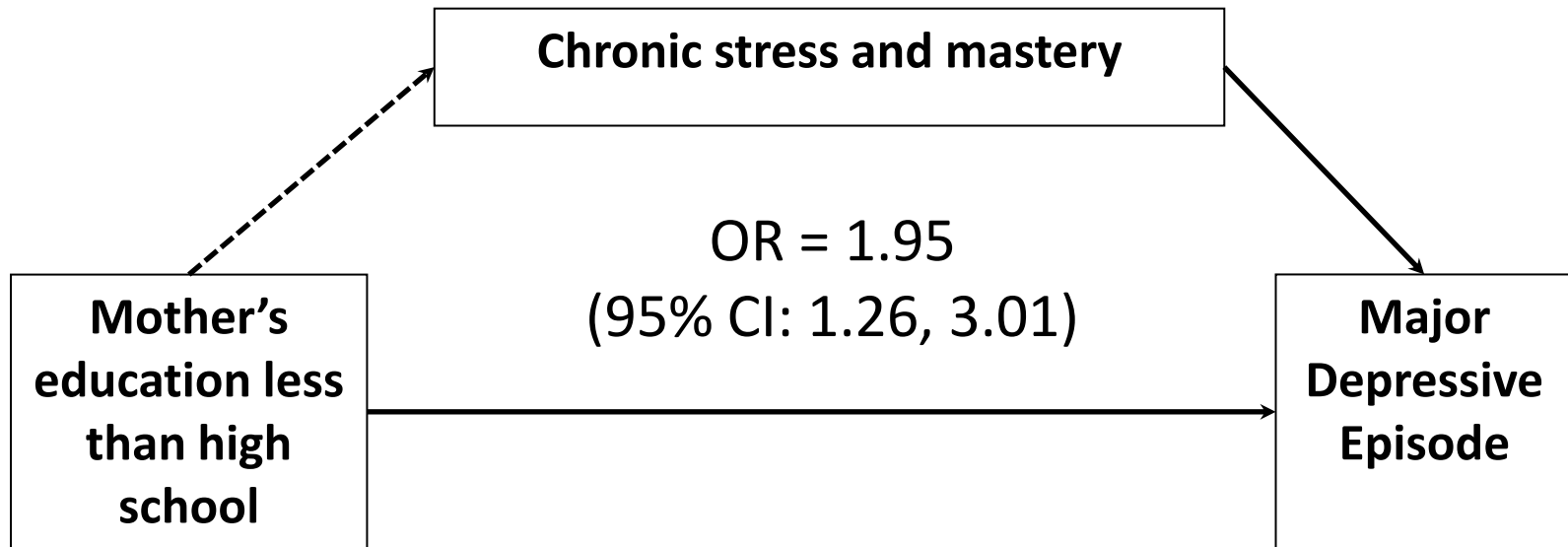


Model 1 estimates:

< HS: OR = 2.08 (1.35, 3.18)

\*controlling for sex, age, race, marital status, prior MDE

# Chronic stress and mastery?



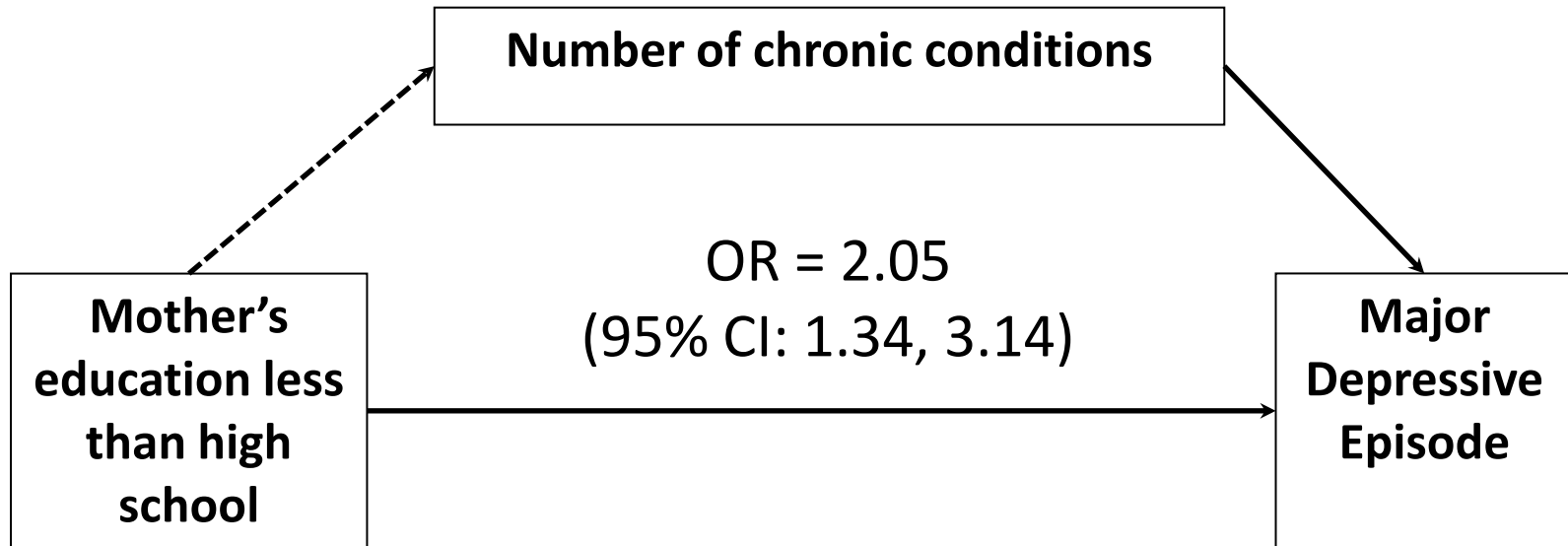
Model 1 estimates:

< HS: OR = 2.08 (1.35, 3.18)

OR = 1.95 (95% CI: 1.26, 3.01)

\*controlling for sex, age, race, marital status, prior MDE

# Physical health?



Model 1 estimates:

< HS: OR = 2.08 (1.35, 3.18)

\*controlling for sex, age, race, marital status, prior MDE

Are you surprised by the strength of the effect for mother's education?

YES

NO

# **Robust effect of mother's education**

- **Few studies distinguish between mother's and father's education**
- **Those that do typically find mother's education to have a stronger effect**
- **However, that effect tends to wane with mediating SEP**
  - Different cohorts
  - Older respondents
  - Less than high school may be a more stringent measure of deprivation
- **Suggestion from animal models that maternal behavior may affect offspring's reactivity to stress**

# Stress during childhood

- **Sonia Lupien: Stress is caused by**
  - **NOVELTY**
  - **UNPREDICTABILITY**
  - **THREAT TO THE EGO**
  - **SENSE OF CONTROL**



# What's in a high school degree?

- **Parents with higher levels of education**
  - Less likely to use harsh and/or erratic discipline
  - More likely to :
    - Show greater warmth and emotional supportiveness
    - Provide cognitively stimulating learning environments and engage in educational behaviours
    - Adopt teaching strategies that promote skill and foster interest and motivation
- **A parent with less than high school education is more likely**
  - to be in a precarious socioeconomic position: job loss, frequent moves

# Next steps

- **Resilience:** “preserving the same level of the outcome or rebounding back to that level after an initial setback”
- **Recent UK study (Netuveli et al.) shows:**
  - Rare among the adult and elderly population
  - Associated with social networks, not personality traits
- **In Canada, among persons having experienced a negative life event:**
  - What are the social network and family structure characteristics of those who bounce back
- **But the future of data allowing these studies is uncertain...**