



## How do Income and Socio-Economic Status Matter?

Disentangling Pathways of Effect on Child Well-Being and Development



Annie McEwen

School of Public Policy and Administration  
Carleton University, Ottawa, Canada

Sept 4, 2015 ISCI 2014



SSHRC  CRSH



## Canadian policy context/motivation

- Canada ranked 17/24 for child poverty (UNICEF RC9)
- Relatively high inequality, BUT high social mobility
- Mid-1990s to 2005 significant increase in child benefits (cash transfers), near tripling of maximum benefits.
- Halving of (fixed) child poverty 1995-2010: 16% to 8%  
...yet stable inequality/relative child poverty: ~15%
- My previous research shows little improvement on Canadian child outcomes over this period
- 2015 national election child policy & family benefits are a key campaign issue with promises worth \$4 Billion annually

Is continued increases in benefits the best policy path forward?

# Motivation

- Undisputed correlation between SES/income and child outcomes
- *But*, SES and income often used interchangeably, need to distinguish between them
- Effective policy intervention depends on an understanding of *causal* processes
- Mediation theories essential to explaining income's causal effects on children
  1. Family Stress Theory (Sociology: Conger, Elder)
  2. Child Investment (Economics: Becker, Heckman)

# My research questions

- How do income and household SES compare in affecting child outcomes?
- How do their effects compare by:
  - a) mediating pathway (parenting and family functioning vs. child activities)?
  - b) outcome (socio-emotional, cognitive, behavioural)?
  - c) age group?

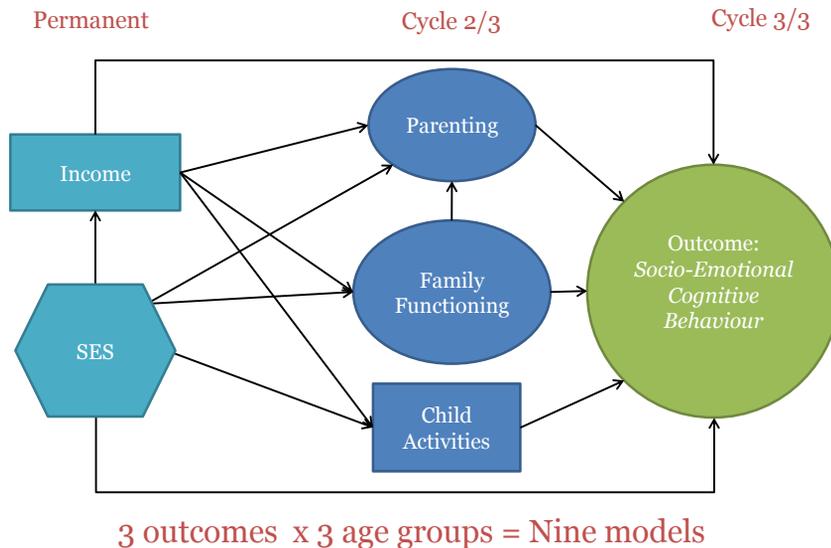
## The Canadian National Longitudinal Survey of Children and Youth:

- Eight cycles from 1994-2008
- This study used 3 data cycles (4-8) = 5 years
- “Nationally representative”; children 0-11 followed, plus ECD cohorts
- Three age groups:
  - **Early Childhood** outcomes age **4/5**
  - **Middle Childhood** outcomes age **12/13**
  - **Adolescence** outcomes age **16/17**
- Sample size varies by age and outcome model  
N = 1782 to 4809
- Attrition = slightly more ‘advantaged’ sample

## Method: Structural Equation Modeling (SEM)

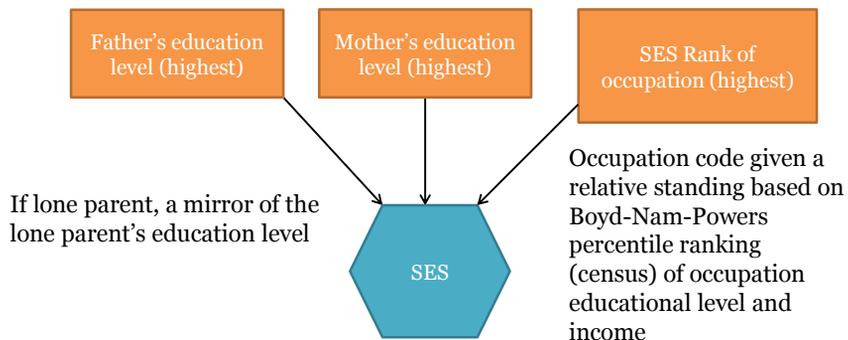
- Latent variables: multiple indicator measurement isolating measurement error
    - E.g. Socio-Emotional Outcome in middle childhood is measured by shared variation of 28 questions:  
emotional-anxiety (7), self-esteem (4), emotional quotient (15), and subjective happiness (2)
  - Funnel weighted (list-wise deletion), StatsCan weights
- \*\*\*Using longitudinal data for temporal ordering/multiple observations rather than change over time\*\*\*

# The Theoretical Model



## SES – over three cycles of data

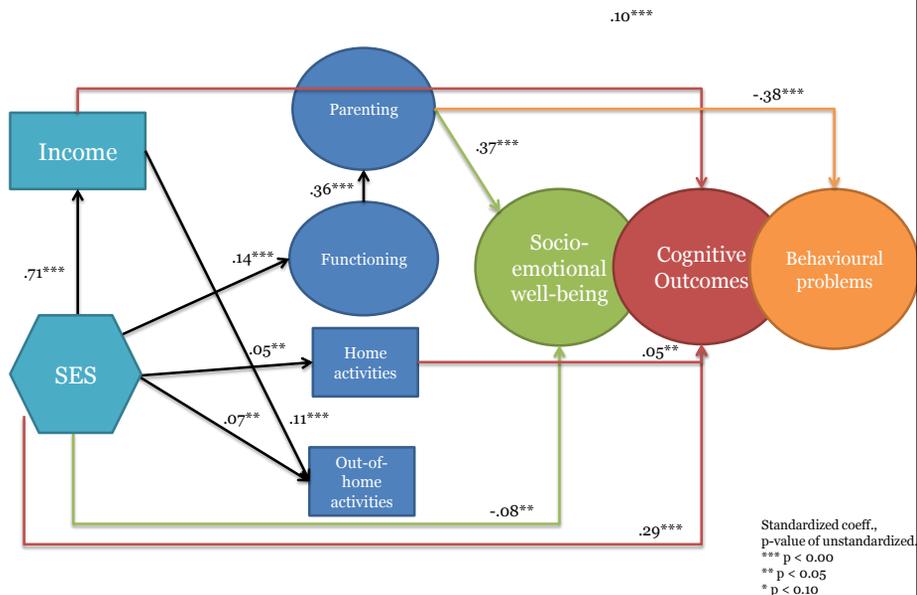
**Definition:** a hierarchical status within the society denoted by occupation and educational level, closely related to but not dependent on, the annual flow of income that comes from this status



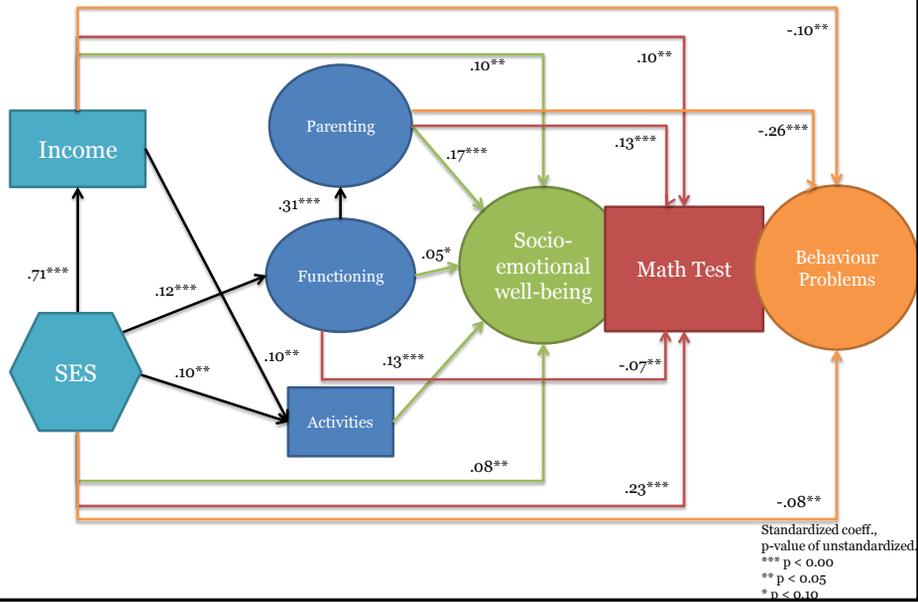
# Covariates

- Child gender (boy)
- First language (reference English)
- Child age (months)
- Mother's age
- Father as PMK middle cycle
- Lone Parent
- Siblings
- Provinces
- Rural
- Cohort

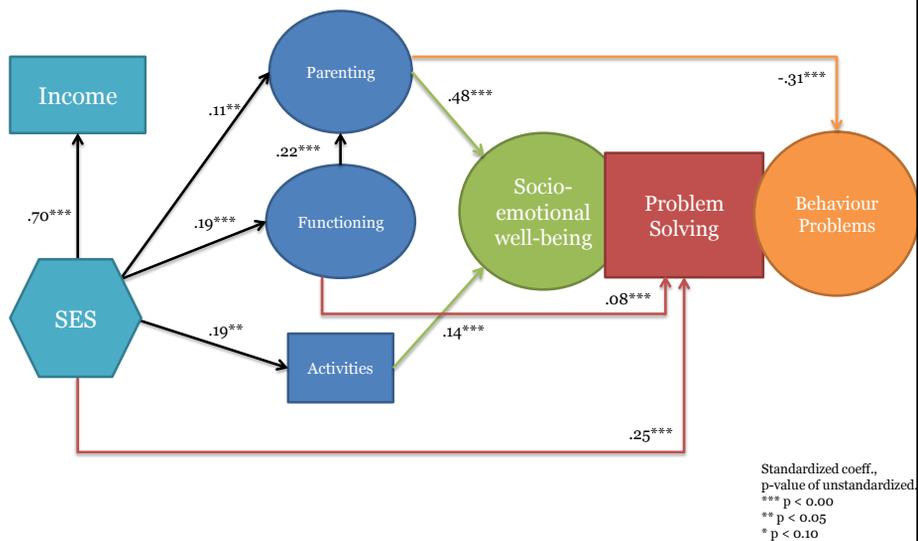
## Results: Early childhood



## Results: Middle childhood



## Results: Adolescence



## How do SES and Income Compare?

- Socio-economic status:
  - Significant effect in all models
  - Residual ‘direct’ effect in 5/9 models
- Income:
  - Significant effect in only 4/9 models
  - Effect is ‘direct’ rather than mediation
- In models with both significant SES and Income effects, SES effects larger

## By Mediating Pathway?

- Constructs had closer relation to SES than income
- Parenting the strongest ‘mediator’ (via Family Functioning)
- Varies by outcome: strong for socio-emotional, weak for cognitive
- Mediation is incomplete, residual ‘direct’ effects
- Operationalization of ‘family investment’ weak

## By Outcome?

- **Socio-emotional well-being:**
  - highly influenced by parenting
  - activities matter after early-childhood
- **Cognitive Development:**
  - Mediation not strong, large ‘direct’ effects
  - SES largest effect
- **Behavioural Problems:**
  - Least influenced by income and SES
  - Parenting strong & consistent effect

## By Age?

- **Early childhood:**  
income and SES have weaker relationship with outcomes than at other ages
- **Middle childhood:**  
Income and SES strongest effects, consistent across outcomes
- **Adolescence:**  
No income effects. SES fully mediated for socio-emotional and behavioural outcomes.

## Extensions

- Multi-group analysis by:
  - income quintile,
  - poor/not poor
  - province
  - gender
- Other mediation pathways:
  - Labour supply
  - Financial stress
  - Parental expectations

## Conclusions

1. SES appears to be more important than income flow
2. Policy interventions to lessen the disadvantage of unequal starting positions should be more than income
3. International research findings may not fit other contexts, e.g. money may matter less in Canada than USA

### Indicators implications

- Distinguish between types of “child outcomes”
- Can’t extrapolate between ages
- Need for better family context measures

## **Annie McEwen**

PhD Public Policy Candidate  
School of Public Policy and Administration,  
Carleton University

Twitter: @AnnieMcEwen  
www.anniemcewen.ca  
annie.mcewen@carleton.ca



### **Early Childhood**

#### **Socio-Economic Status**

- ← Mother education
- ← Father education level
- ← Average BNP SES

#### **Family functioning (P)**

- Communication Score
- Support Score
- Decisions

#### **Positive Parenting**

- Positive interaction
- Effective parenting
- Rational parenting

#### **Socio-Emotional Well-being**

- Unhappy score
- Anxiety score
- Peer relations

#### **Cognitive Development**

- PPVT score
- Number Knowledge
- Who Am I? Assessment

#### **Behavioural problems**

- Physical Aggression 1
- Physical Aggression 2
- Indirect aggression

### **Middle Childhood**

#### **Socio-Economic Status**

- ← Mother education
- ← Father education level
- ← Average BNP SES

#### **Family functioning (P)**

- Communication Score
- Support Score
- Decisions

#### **Positive Parenting (C)**

- Positive interaction
- Effective parenting
- Rational parenting

#### **Socio-Emotional Well-being (C)**

- Emotional Disorder/Anxiety (reversed)
- Self Esteem
- Emotional Quotient
- Subjective happiness

#### **Behavioural problems (C)**

- Indirect Aggression
- Physical Aggression
- Pro-social Score (reversed)
- Property Offence score

### **Adolescence**

#### **Socio-Economic Status**

- ← Mother education
- ← Father education level
- ← Average BNP SES

#### **Family functioning (C)**

- Communication Score
- Support Score
- Decisions

#### **Positive Parenting (C)**

- Positive interaction
- Effective parenting
- Rational parenting

#### **Socio-Emotional Well-being (C)**

- Youth depression (reversed)
- Self Esteem
- Emotional Quotient
- Subjective happiness

#### **Behavioural problems (C)**

- Criminal activity
- Violence
- Drugs