

# Being Born and Starting School in Manitoba: The Families First Screening (FFS) and the Early Development Instrument (EDI)



**National Child Day Forum 2010 - Pre-Conference Seminar:  
Moving Child Health Data into Practice**  
November 15, 2010 – Winnipeg, Manitoba

 **Healthy Child Manitoba**  
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# Presentation Overview

- **Part I:** Being Born in Manitoba:  
The Families First Screening (FFS)
- **Part II:** Starting School in Manitoba:  
The Early Development Instrument (EDI)
- **Part III:** Implications for Policy and Practice

# PART I:



## Being Born in Manitoba: The Families First Screening (FFS)

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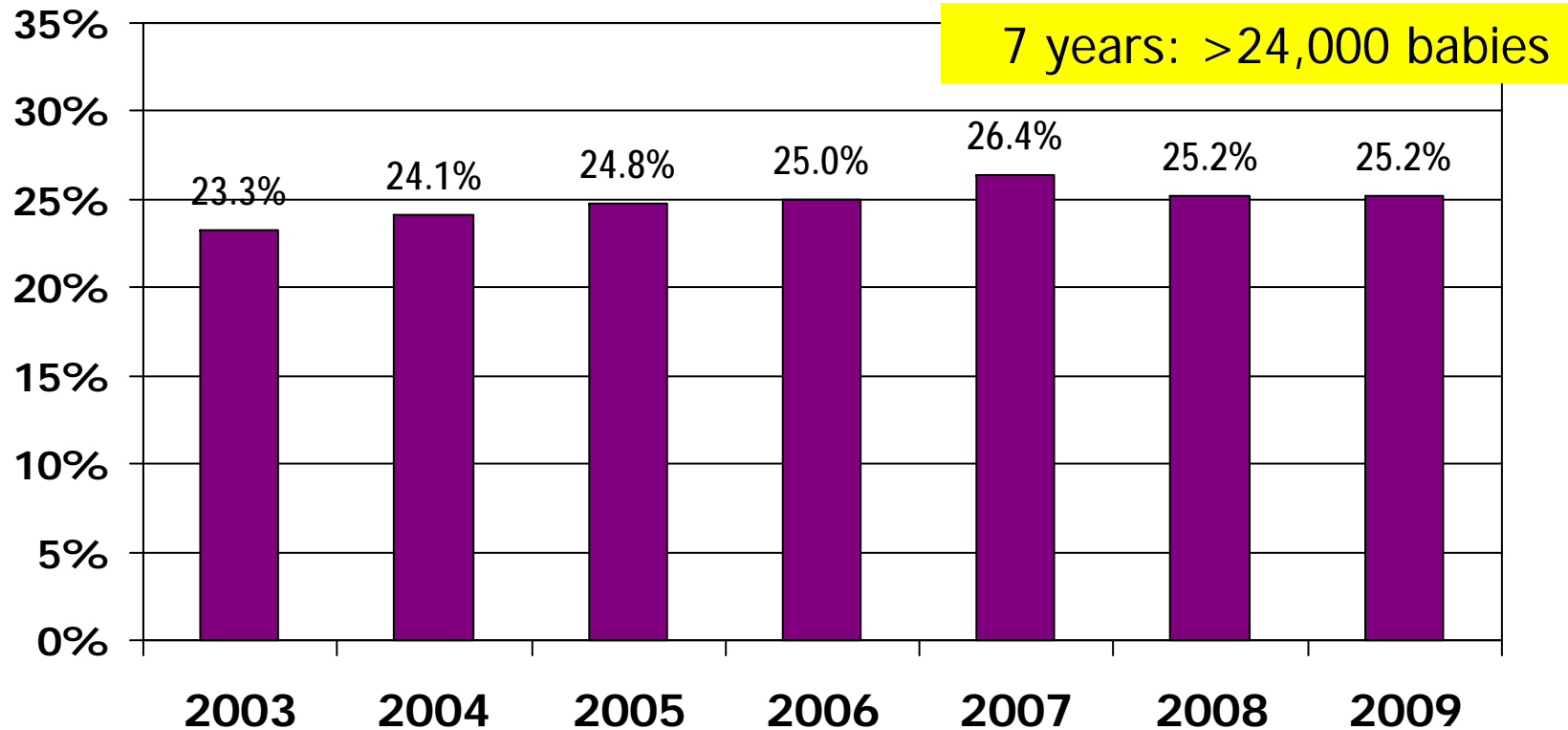
# What is the Families First Screening?

- Healthy Child Manitoba Office (HCMO) partnership with Regional Health Authorities (RHAs) to screen all families with newborns for risk factors associated with poor child outcomes (est. 1999, revised 2003)
- Public Health Nurses (PHNs) collect information on 39 risk factors, including congenital anomalies, birth weight, multiple births, alcohol use and smoking during pregnancy, mother's age, education, marital status, mental health, and family social isolation
- Population-level data not available from other sources

# What is the Families First Screening?

- Two-fold purpose: Public health intervention and population risk monitoring for policy development
- Recent evidence indicates good sensitivity (77%) and specificity (83%) in predicting later involvement with child welfare agencies (Brownell et al., 2007)
- On average, 12,174 Families First Screenings are completed each year (95% of all postpartum referrals and 83% of all births) in Manitoba
- The following slides use 2003-2009 FFS data (note: 2003 FFS results: these are our 2008 EDI children)

## Children's Vulnerability at Birth in Manitoba: Prevalence of $\geq 3$ Risk Factors in Manitoba, 2003-2009



Source: 2003-2009 Families First Screening results

Note: Shorter bars are better

# Shared Destiny:

## Our Aboriginal Children and the Future of Manitoba



*“Manitoba  
cannot  
prosper if  
Aboriginal  
people do not  
prosper.”*

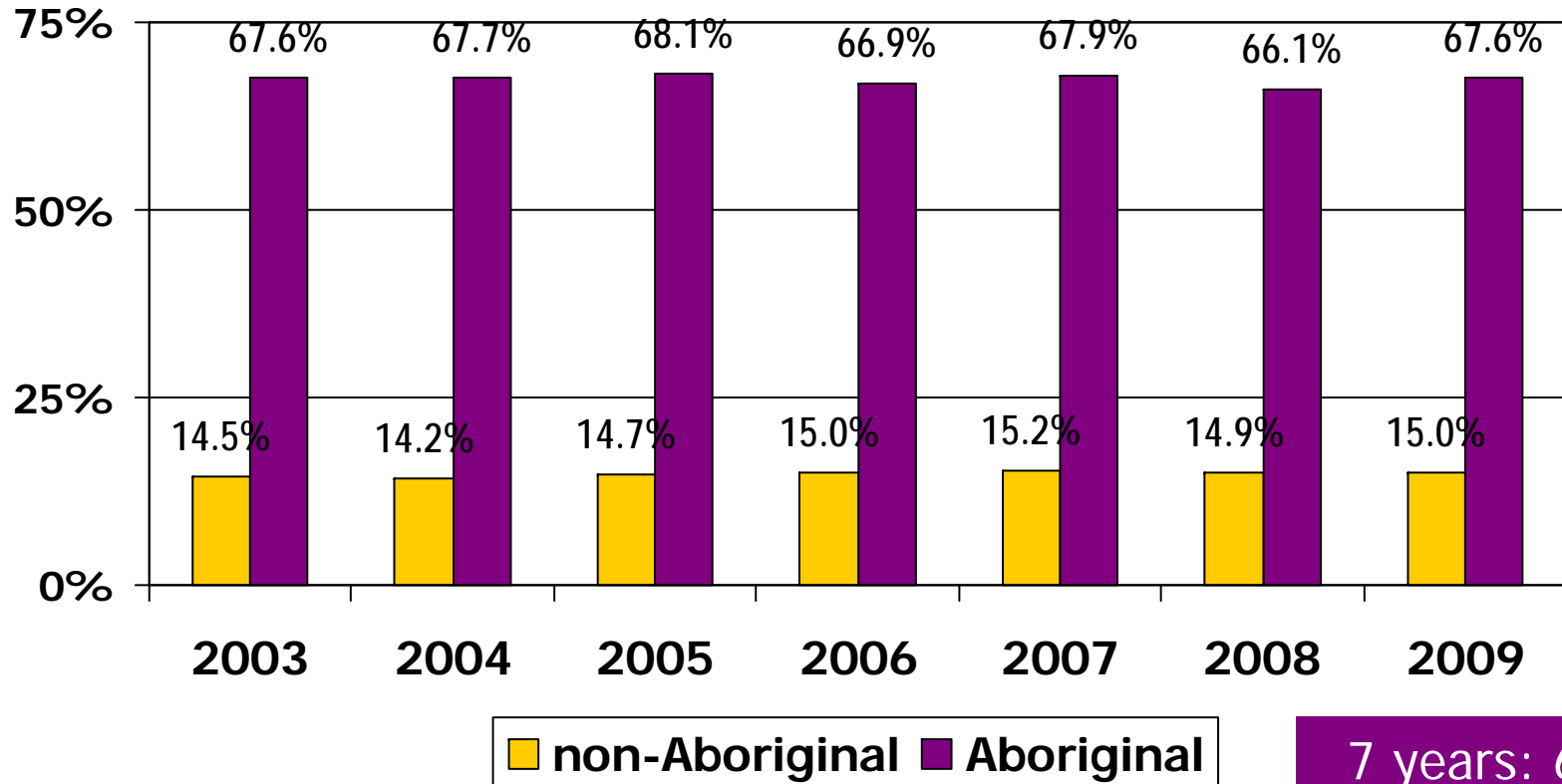
*-Honourable Oscar Lathlin,  
Minister of Aboriginal and  
Northern Affairs  
(1947-2008)*

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## Prevalence of Vulnerable Children at Birth ( $\geq 3$ Risk Factors) in Manitoba, 2003-2009



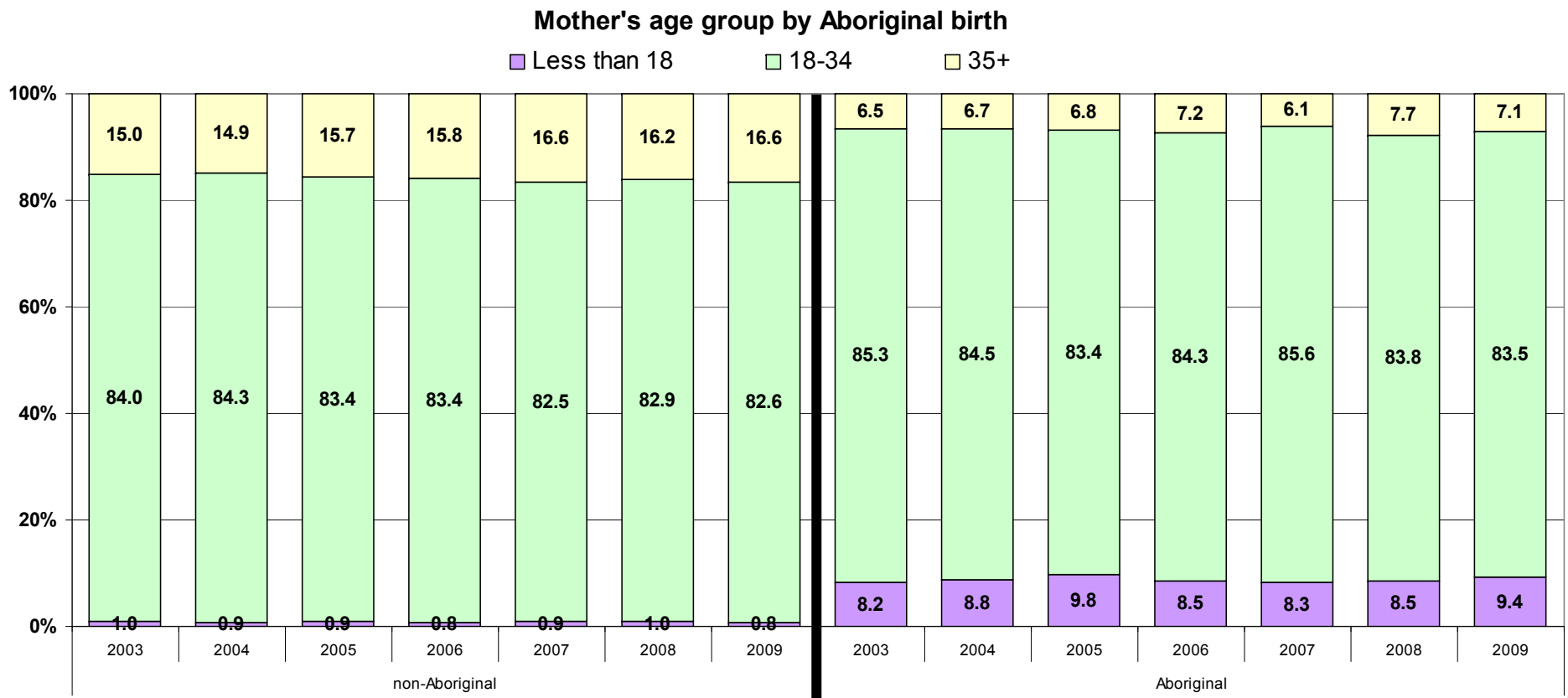
7 years: 67%  
= 8433 babies

Source: 2003-2009 Families First Screening results

Note: Shorter bars are better



# Maternal Age: Non-Aboriginal Births and Aboriginal Births, 2003-2009



## Top 10 FFS Risk Factors (2003-2009)

### Non-Aboriginal: (15%)

1. **Assisted birth (14%)** ↑
2. Mom < HS (14%) ↓
3. HBW birth (13%) ↓
4. Mom smoking preg (12%) ↓
5. **Mom depression (11%)** ↑
6. *Mom alcohol preg (10%) --*
7. Financial difficulties (8%) ↓
8. Premature birth (7%) ↓
9. Lone parent (6%) ↓
10. **Social isolation (5%)** ↑

### Aboriginal: (67%)

1. Financial difficulties (60%) ↓
2. Mom < HS (57%) ↓
3. Mom smoking preg (56%) ↓
4. Lone parent (40%) ↓
5. *Mom alcohol preg (30%) --*
6. **Mom teen 1st birth (27%)** ↑
7. *Mom CA history (22%) --*
8. **Mom depression (21%)** ↑
9. *Existing CFS file (20%) --*
10. HBW birth (19%) ↓

# PART II:



## Starting School in Manitoba: The Early Development Instrument (EDI)

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# The Early Development Instrument (EDI)

- A population-based, community-level measure of early childhood development (ECD) and school readiness
- Kindergarten teachers from Manitoba's School Divisions complete the EDI on all Kindergarten-aged children (about 20 min per child)

## *What does the EDI measure?*

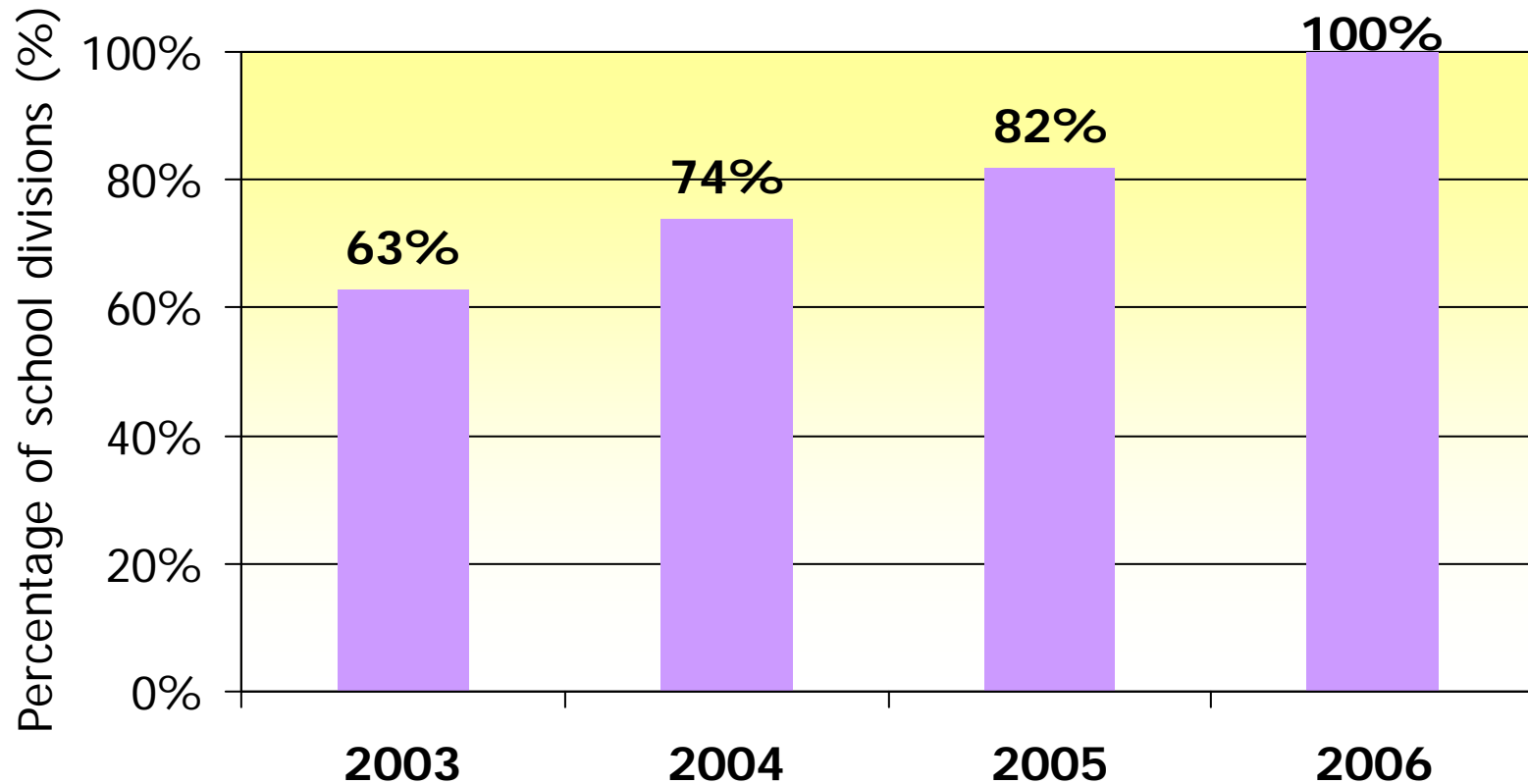
- Children's "readiness for school" across 5 different areas of child development:
  - Physical Health and Well-Being
  - Social Competence
  - Emotional Maturity
  - Language and Cognitive Development
  - Communication Skills and General Knowledge



# History of the EDI in Manitoba (1998–present)

- **1998:** presentations by Dr. Fraser Mustard and Dr. Dan Offord
- **1999:** Understanding the Early Years (UEY) in Winnipeg School Division
- **2000:** UEY in South Eastman region
- **September 2001:** HCCC decision for province-wide, voluntary phase-in of EDI in Manitoba, funded and coordinated by the Healthy Child Manitoba Office (HCMO), Government of Manitoba
- **May 2002:** Dr. Dan Offord formally launches EDI in Manitoba
- **October 2002:** Dr. Magdalena Janus trains first school divisions in EDI
- **February 2003:** First school divisions implement the EDI in Manitoba

# Implementation of the EDI in Manitoba: Percentage of School Divisions, 2003-2006



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# Using the EDI in Manitoba

1. Measuring progress in ECD
2. Understanding progress and identifying priorities in ECD
3. Influencing communities
4. Influencing public policy
5. Evaluating population-level effects of ECD investments

UPDATE

# How Many Manitoba Children Were Very Ready\* to Start School in 2009?

About 3 in 5 of all children (63%, up from 62%)

About 4 in 6 of non-Aboriginal children (67%, up from 66%)  
and nearly 3 in 6 Aboriginal children (46%)

Over 2 in 3 girls (71%, up from 67%)  
and 1 in 2 boys (55%, up from 51%)

*\* top 30% in one or more EDI domains*

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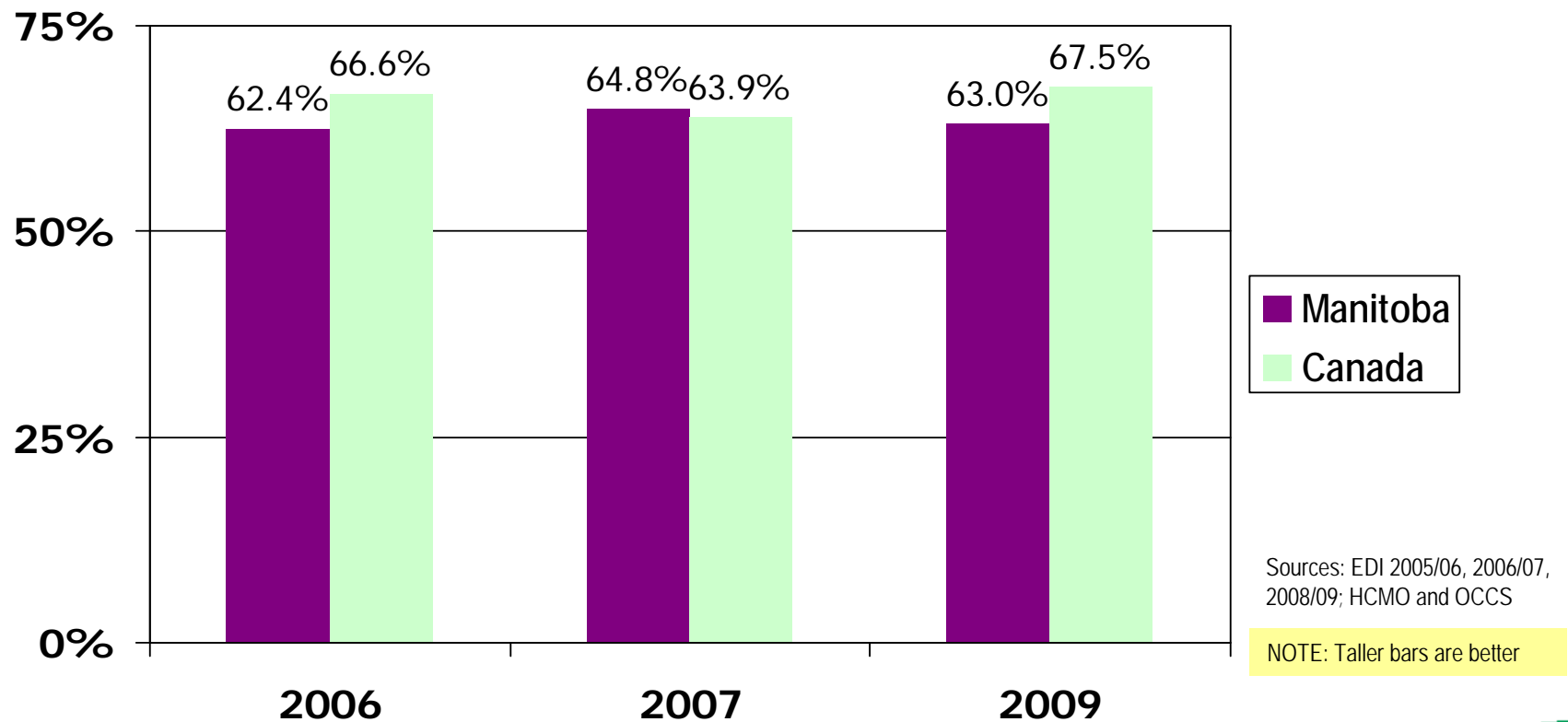
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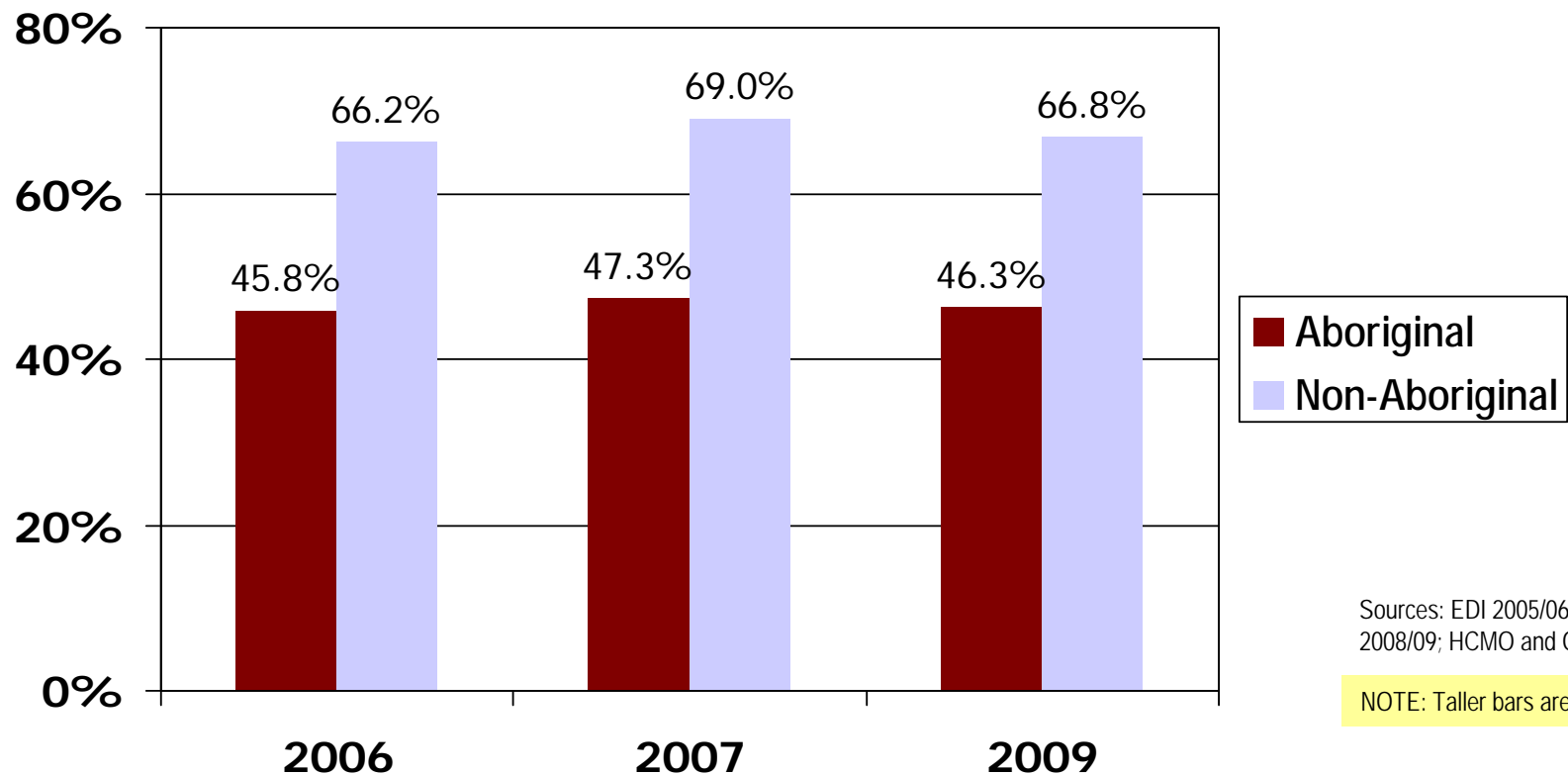
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## Kindergarten Children's Success Over Time: Very Ready for School in One or More Areas of Early Development, Manitoba and Canada, 2006-2009



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# Kindergarten Children's Success Over Time: Very Ready for School in One or More Areas of Early Development, Manitoba, 2006-2009



Sources: EDI 2005/06, 2006/07, 2008/09; HCMO and OCCS

NOTE: Taller bars are better

# How Many Manitoba Children Were Not Ready\* to Start School in 2009?

About 1 in 4 of all children (29%, up from 28%)

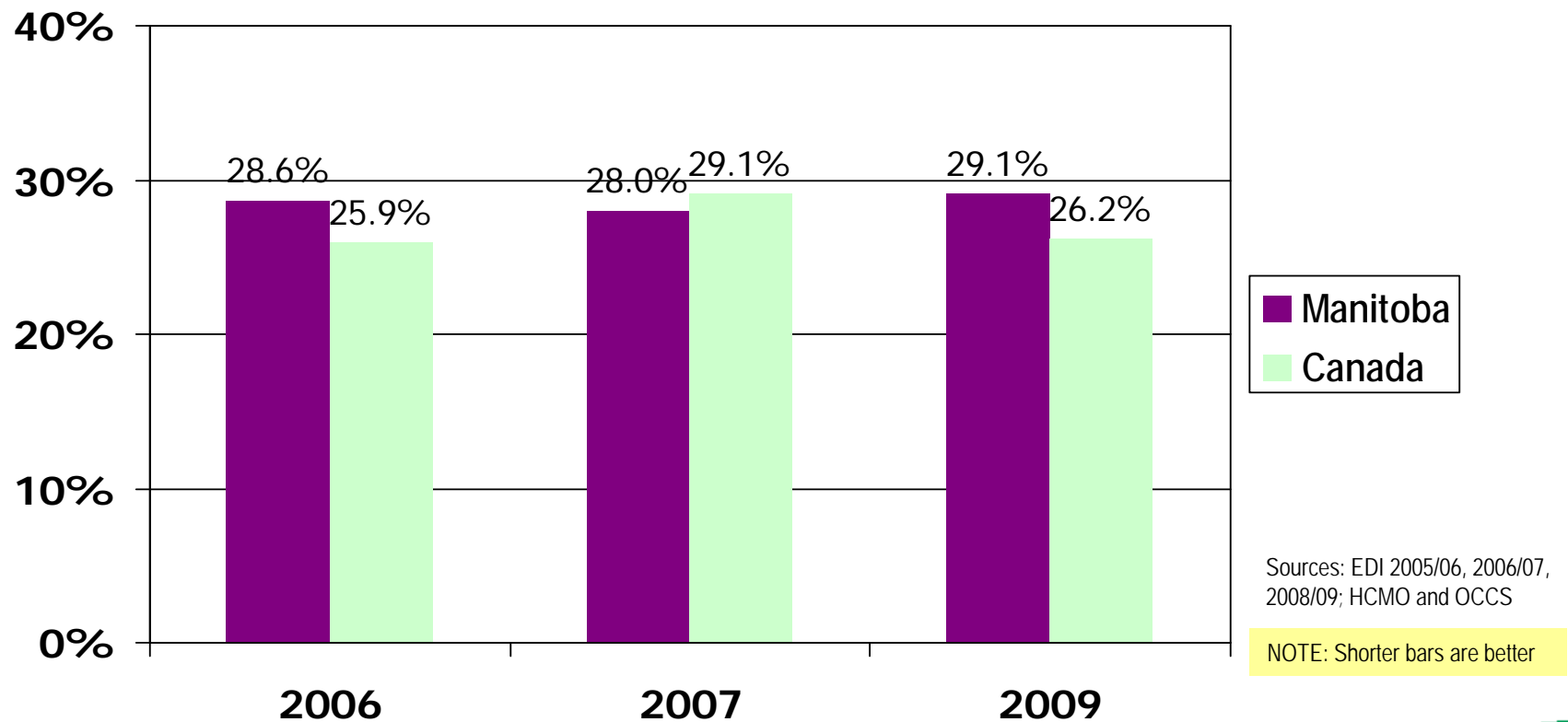
About 1 in 4 of non-Aboriginal children (25%, up from 24%)  
and nearly 2 in 4 Aboriginal children (45%)

About 1 in 5 girls (22%, up from 19%)  
and 1 in 3 boys (37%, up from 32%)

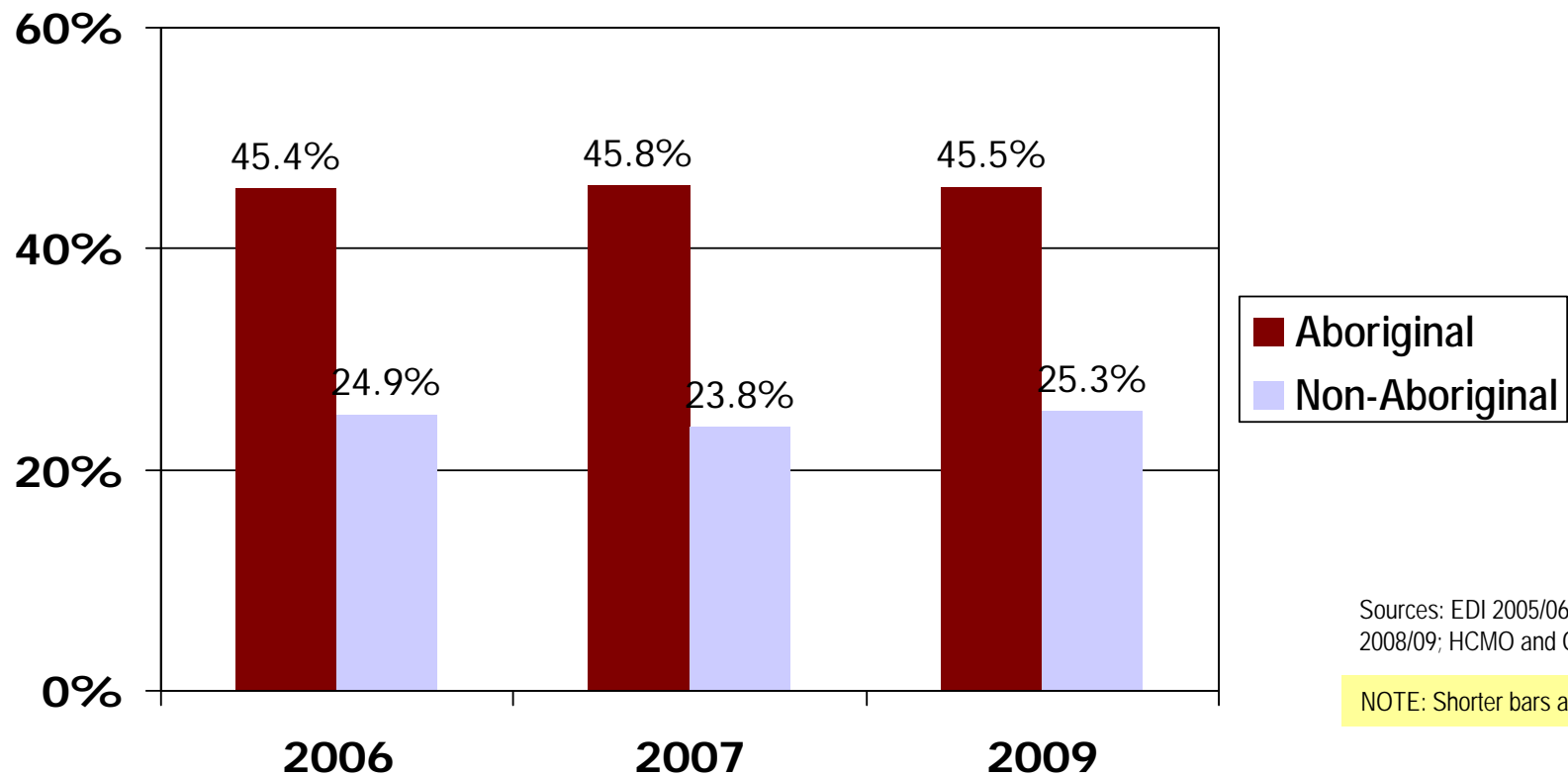
... language improving (11%: lowest ever),  
but emotional worsening (13%: highest ever)

*\* bottom 10% in one or more EDI domains*

# Kindergarten Children's Vulnerability Over Time: Not Ready for School in One or More Areas of Early Development, Manitoba and Canada, 2006-2009



# Kindergarten Children's Vulnerability Over Time: Not Ready for School in One or More Areas of Early Development, Manitoba, 2006-2009

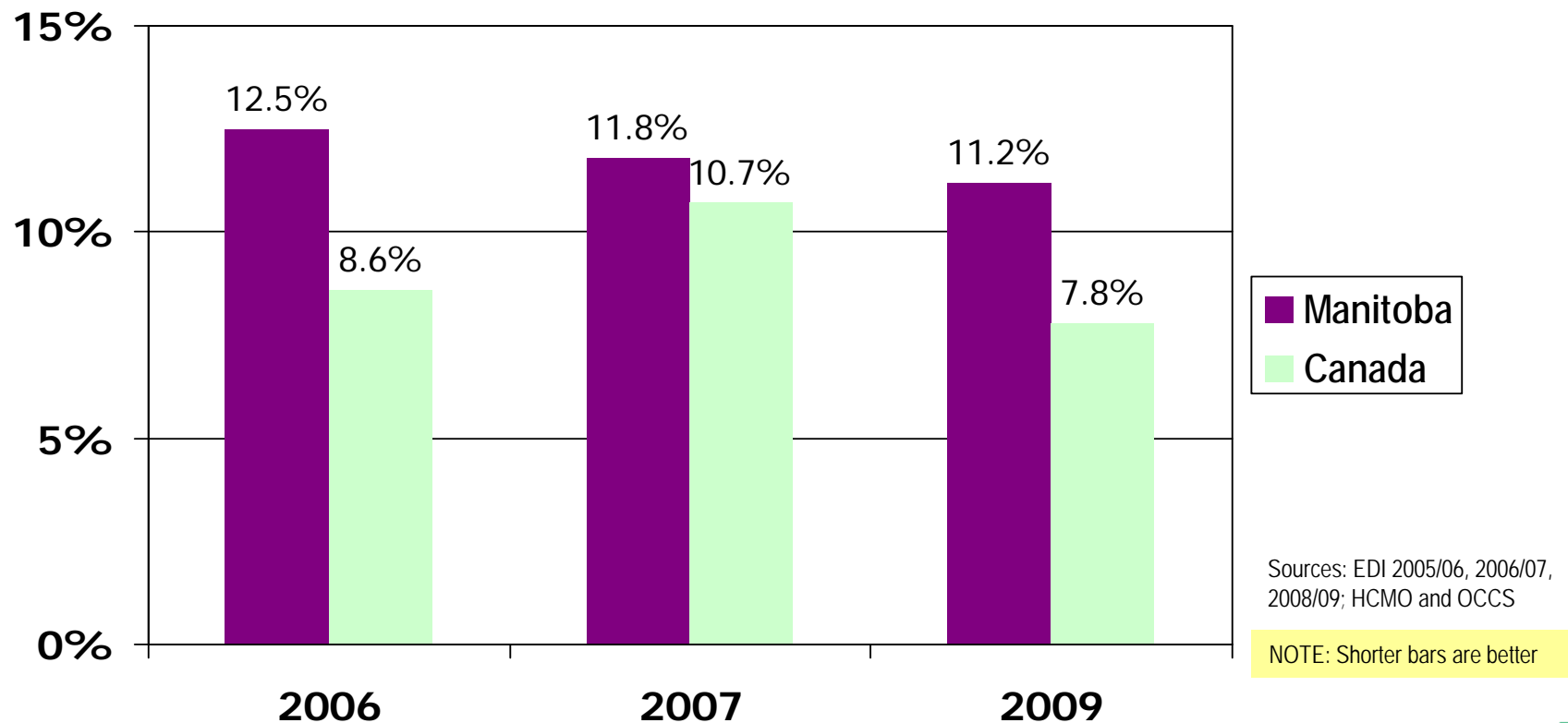


Sources: EDI 2005/06, 2006/07, 2008/09; HCMO and OCCS

NOTE: Shorter bars are better

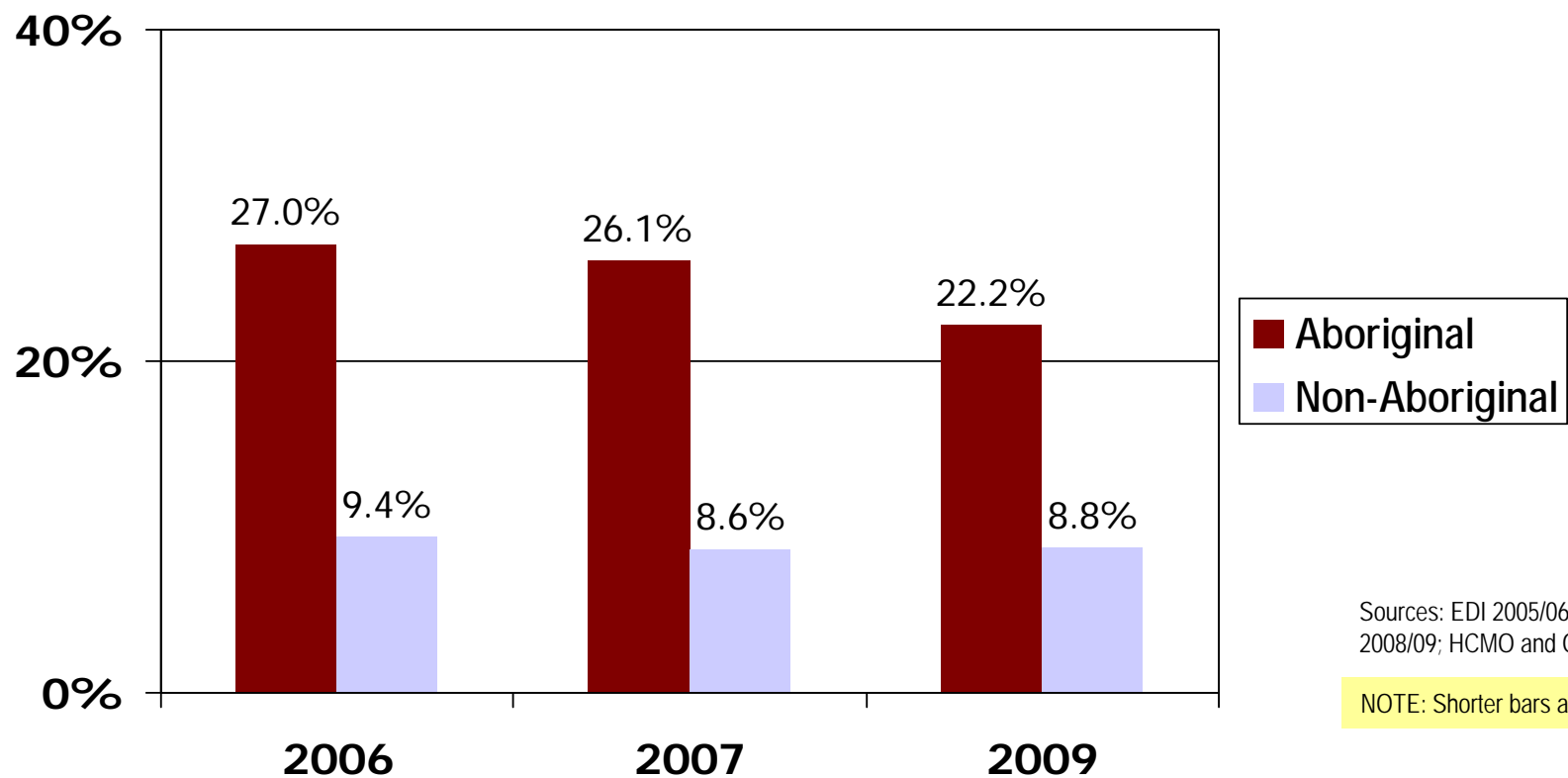
UPDATE

## Kindergarten Children's Vulnerability Over Time: Not Ready for School in Language and Cognitive Development, Manitoba and Canada, 2006-2009



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Sources: EDI 2005/06, 2006/07, 2008/09; HCMO and OCCS

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# PART III:

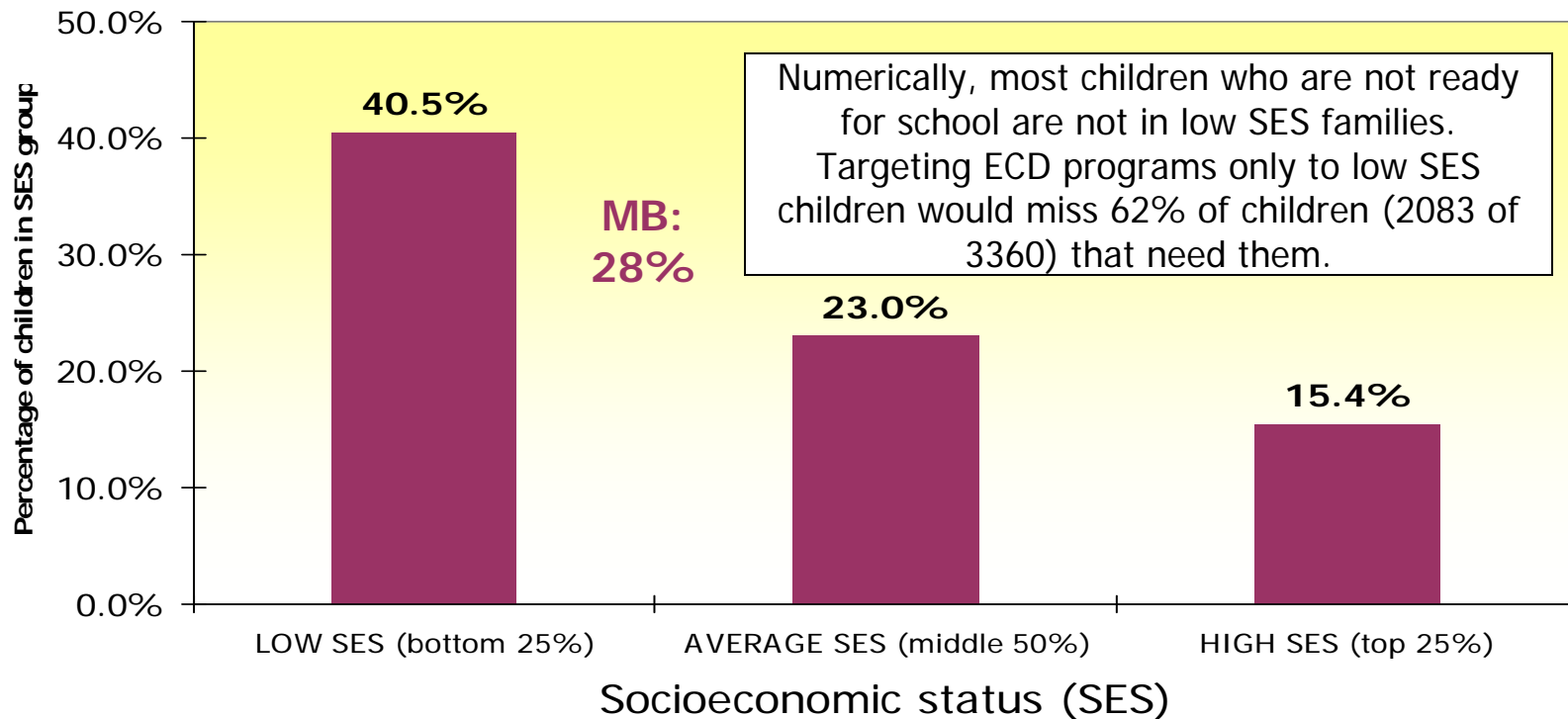


## Implications for Policy and Practice

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# Inequalities in Vulnerability: SES and Children Not Ready to Learn in School – (age 5 years), Manitoba, 2006



Source: EDI Parent Survey 2006 and 2006 EDI results

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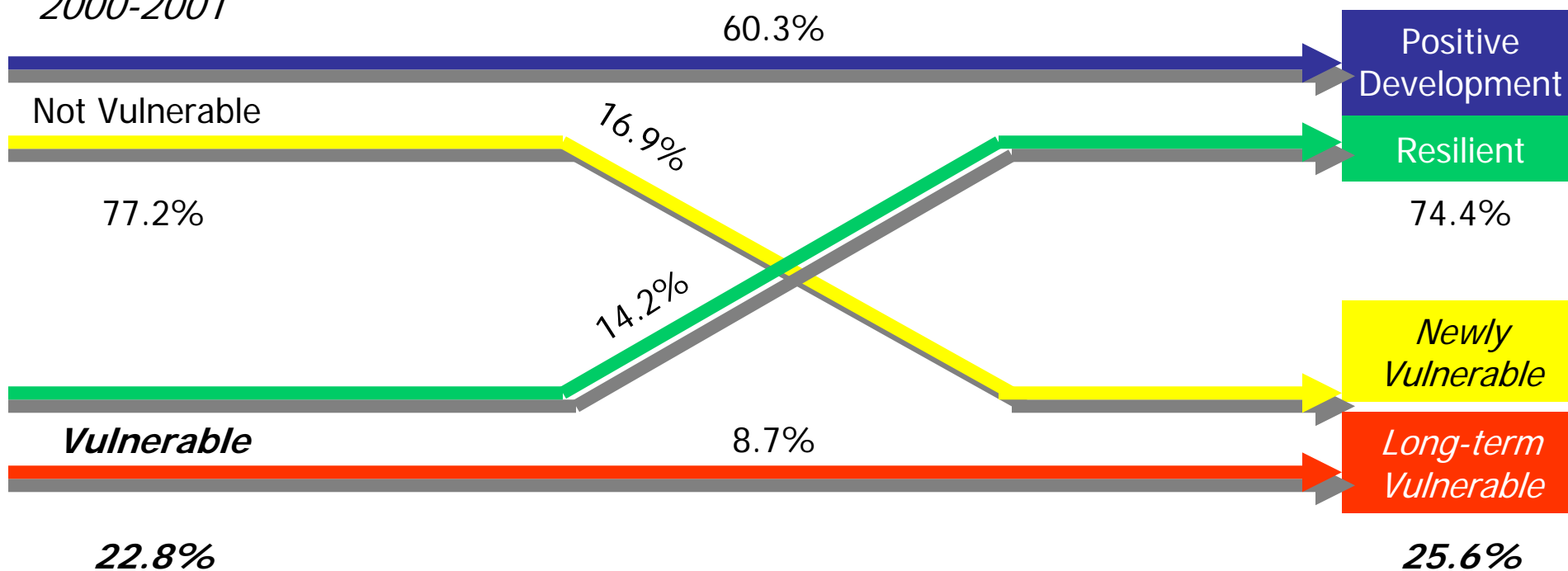


# Growing Up in Manitoba: Vulnerability is Not Permanent



*Families First Screen  
2000-2001*

*EDI 2005-2006*







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# Toward a Best Policy Mix for Manitoba's Children

Policy goals = flattening socioeconomic gradients and improving trajectories over time

-  Promoting positive development (*universal*)
-  Building resilience (*targeted*)
-  Preventing new vulnerability (*targeted*)
-  Helping long-term vulnerability (*clinical*)

= "best policy mix" for children and families

# Policy Implications for Manitoba

- Children represented in 2006, 2007, 2009 EDI results were born in 2000, 2001, and 2003: Results reflect our investments in these children (prenatal to school entry): with some exceptions (Family Choices – Early Learning and Child Care, Triple P, overall investment in ECD in Manitoba has not grown dramatically)
- Using 2006 EDI results as a provincial baseline for measuring Manitoba's progress for its children, we have more work to do: 2009 results highest vulnerability (economic impact?)
- Significant proportions and numbers of Manitoba children continue to be vulnerable ("not ready") when starting school: increasing population reach is imperative for improving outcomes at a population level
- Success story: improved language and cognitive development (both literacy and numeracy)
- Warning signs: worsening emotional maturity (prosocial and helping behaviour)
- Persisting inequalities: boys vs. girls, Aboriginal vs. non-Aboriginal

# Investing in Early Childhood Development: The Economic Imperative

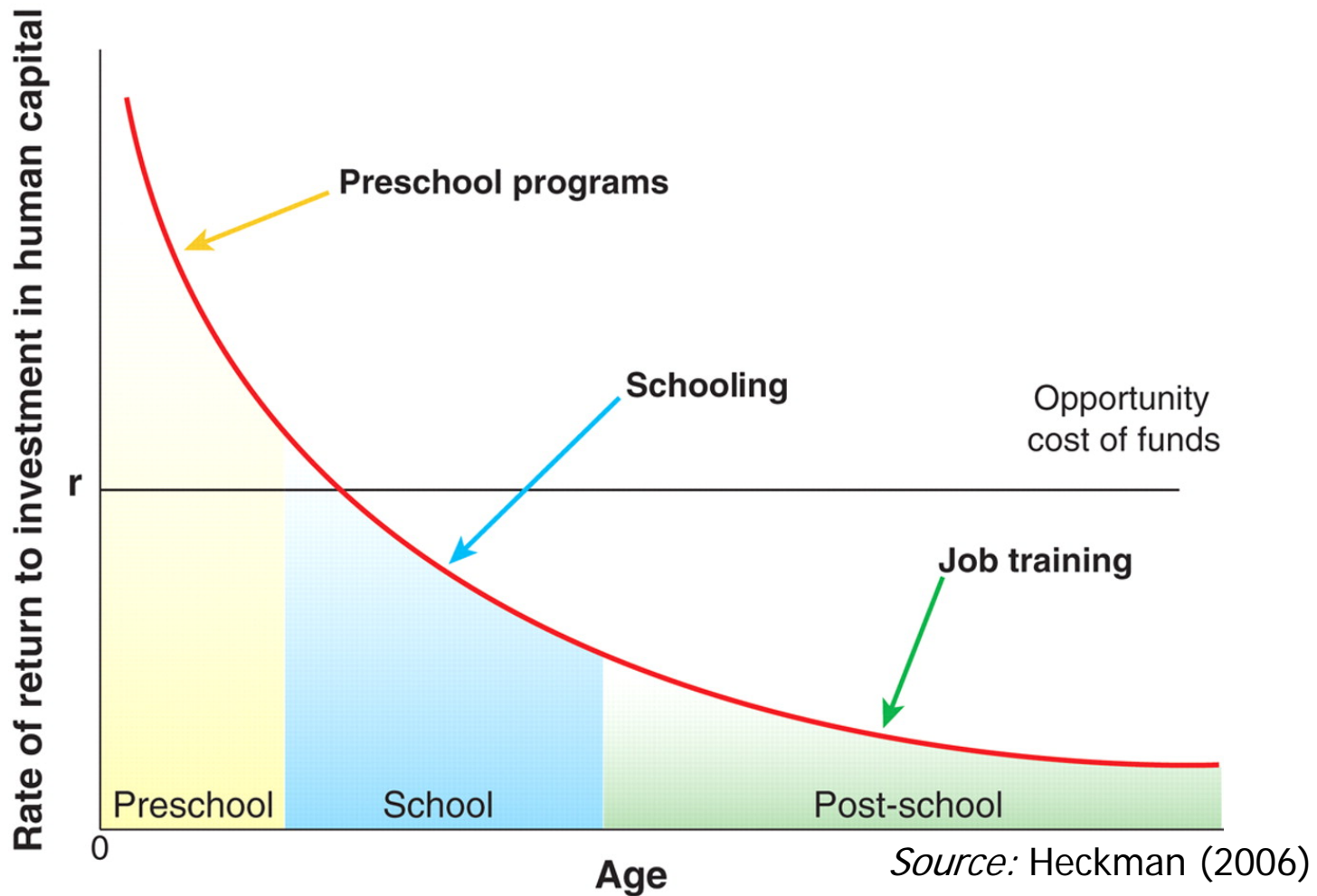
- Leading economists have shown the importance of ECD to our province and country's economic future. Knowledge is the engine of the 21st century economy. Better brains and innovative ideas fuel economic growth, create jobs, increase wealth, and secure our financial future.

*"The real question is how to use the available funds wisely. The best evidence supports the policy prescription: Invest in the very young."*

*James J. Heckman, PhD  
2000 Nobel Laureate in Economic Sciences*

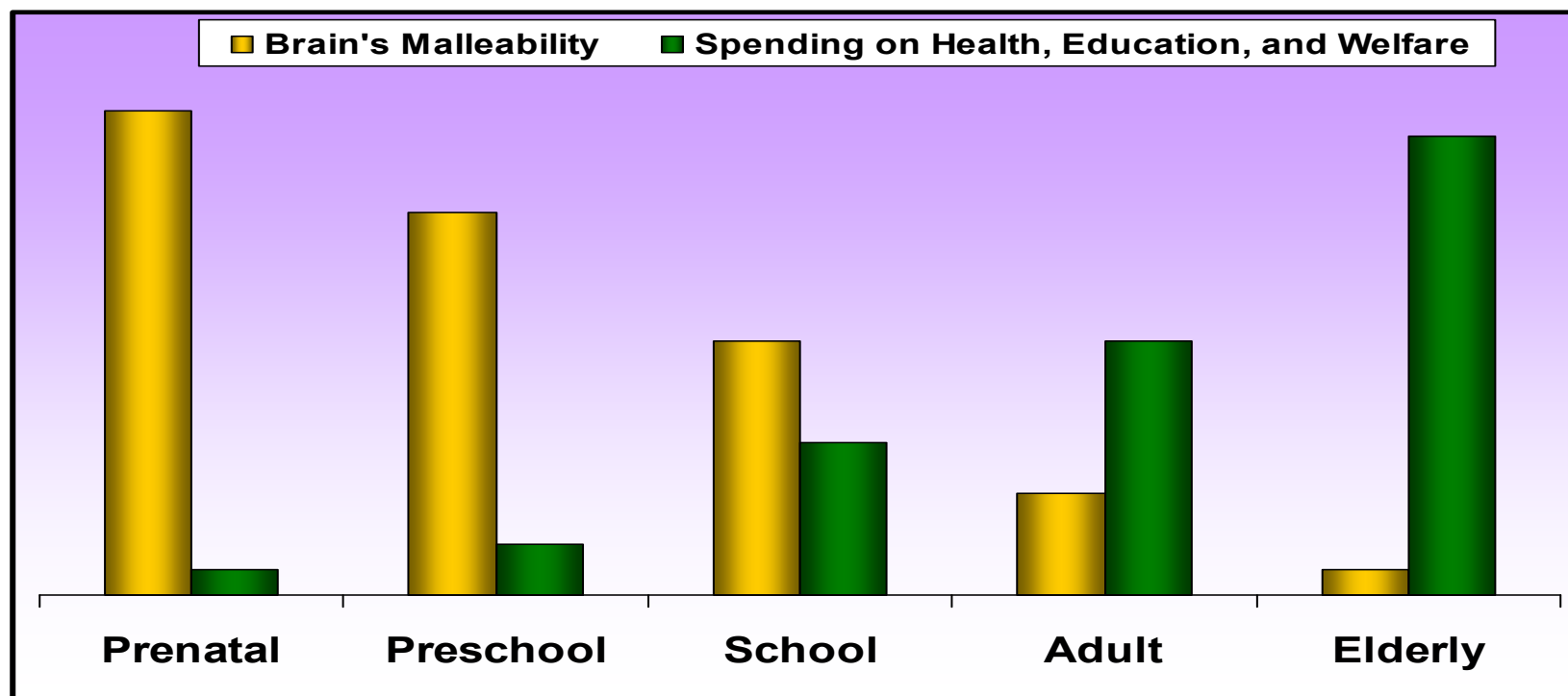


## Rates of return to human capital investment



# Opportunity Lost . . .

Addressing the Mismatch Between Opportunity & Investment



Adapted from: "How Nurture Becomes Nature: The Influence of Social Structures on Brain Development"  
Bruce Perry, Baylor College of Medicine, Houston, Texas.

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# The Cost of Second Chances

*"[We are] a second chance society. Our educational policy is based on a fundamental optimism about the possibility of human change. The dynamics of skill formation reveal that later compensation for deficient early family environments is very costly. If society waits too long to compensate, it is economically inefficient to invest in the skills of the disadvantaged. A serious trade-off exists between **equity and efficiency** for adolescent and young adult skill policies. **There is no such trade-off for policies targeted toward disadvantaged young children.**"*

*James J. Heckman, PhD  
2000 Nobel Laureate in Economic Sciences*

Source: Heckman (2006, p. 1901)

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# Conclusions and a Call to Action

- Our success in ECD is **an indicator of the success of our society and democracy**: equality of opportunity, fairness and justice, and social responsibility
- Our success in ECD is also **a forecast of our social and economic future** and is **the best economic investment**
- Communities, governments, business leaders, researchers, and practitioners must **establish new partnerships**, building on the ECD accomplishments of the past decade to meet the most important ECD challenge of the next decade: **Bridging the gap between knowledge and action to build a comprehensive, effective ECD system for all children, supported by convincing evaluation evidence to help protect the system in the future**

# Thank You

## Dr. Rob Santos

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Healthy Child Manitoba Office  
Senior Policy Advisor  
Healthy Child Committee of Cabinet  
Senior Advisor to the Deputy Minister of  
Healthy Living, Youth and Seniors  
Government of Manitoba

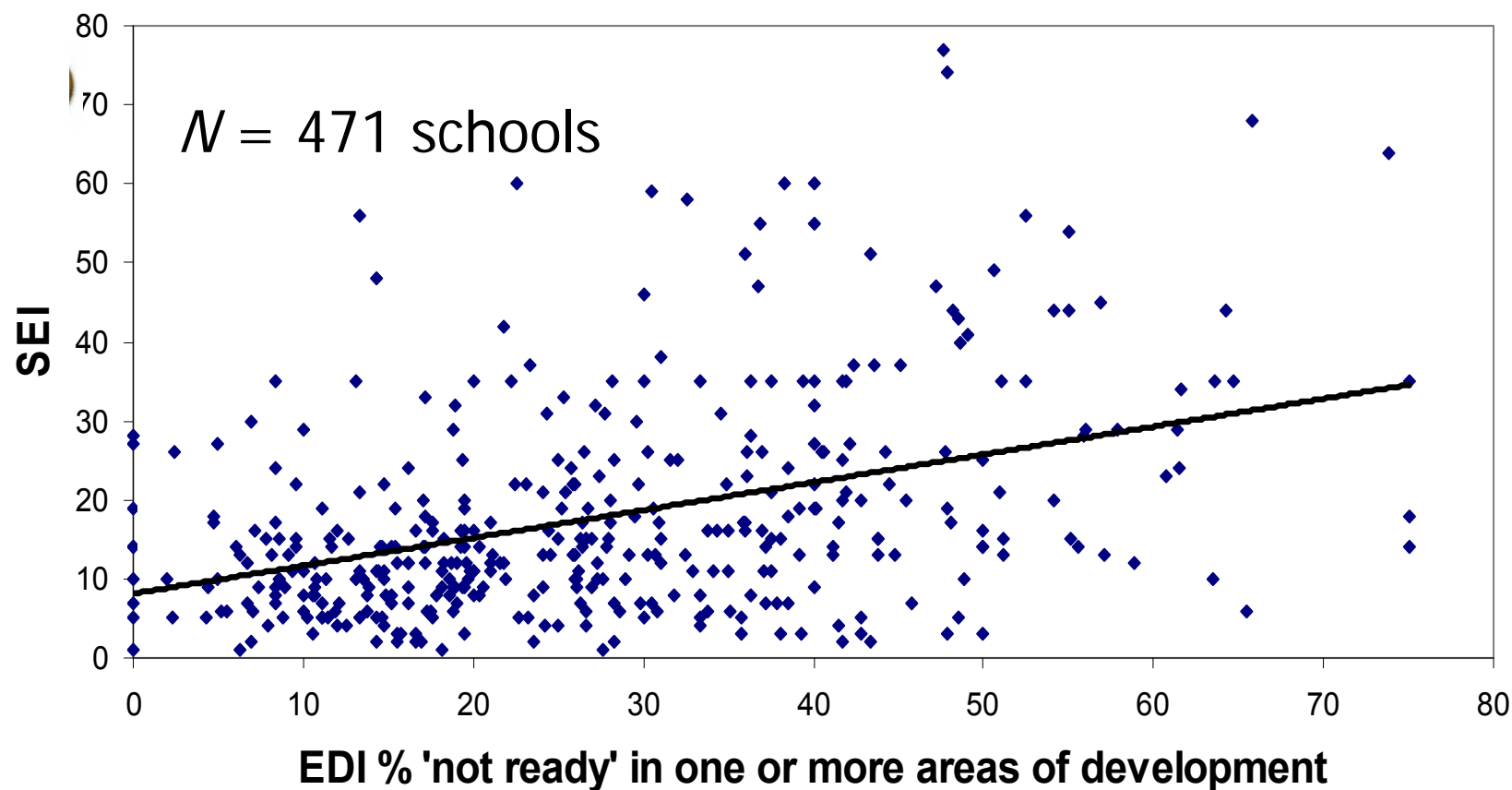
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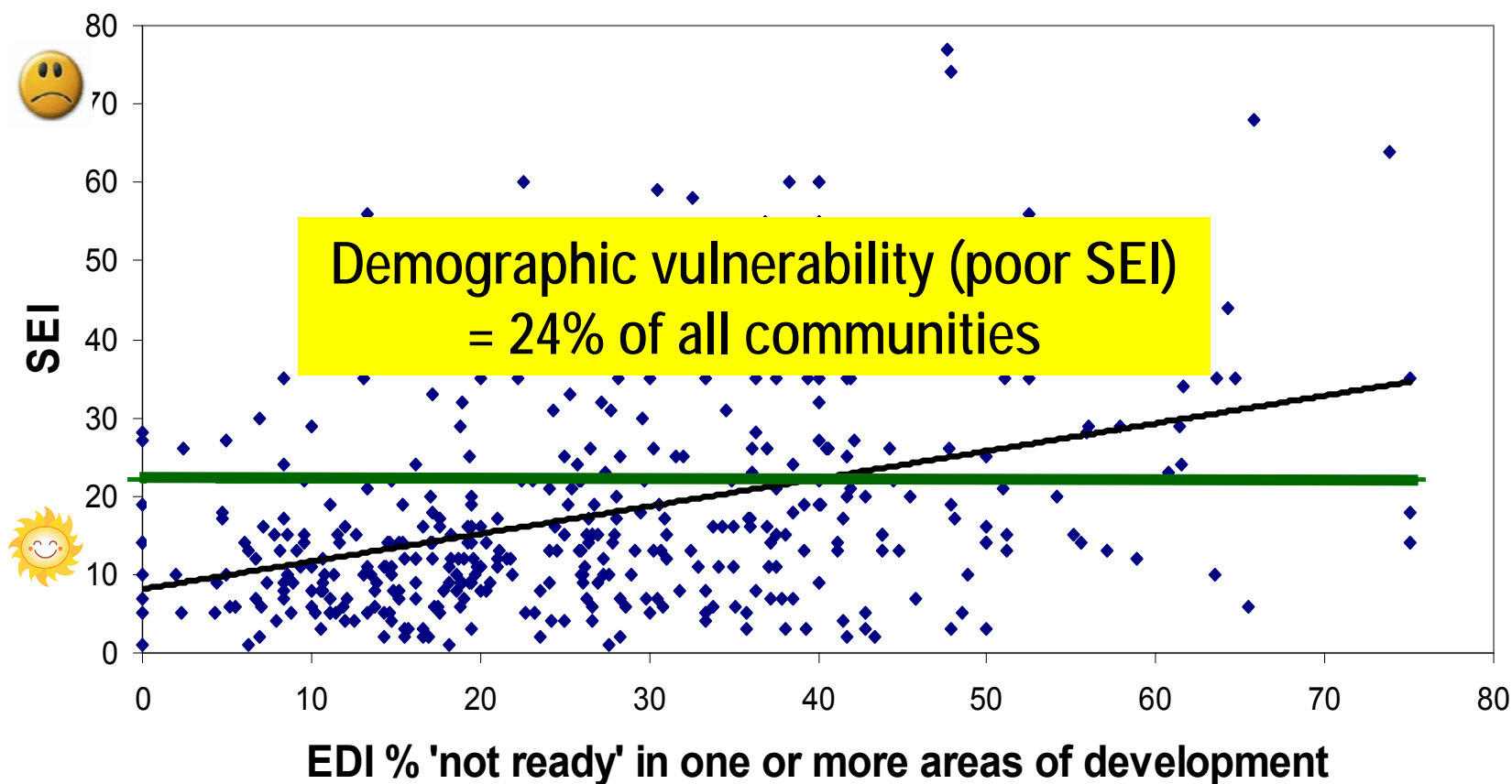
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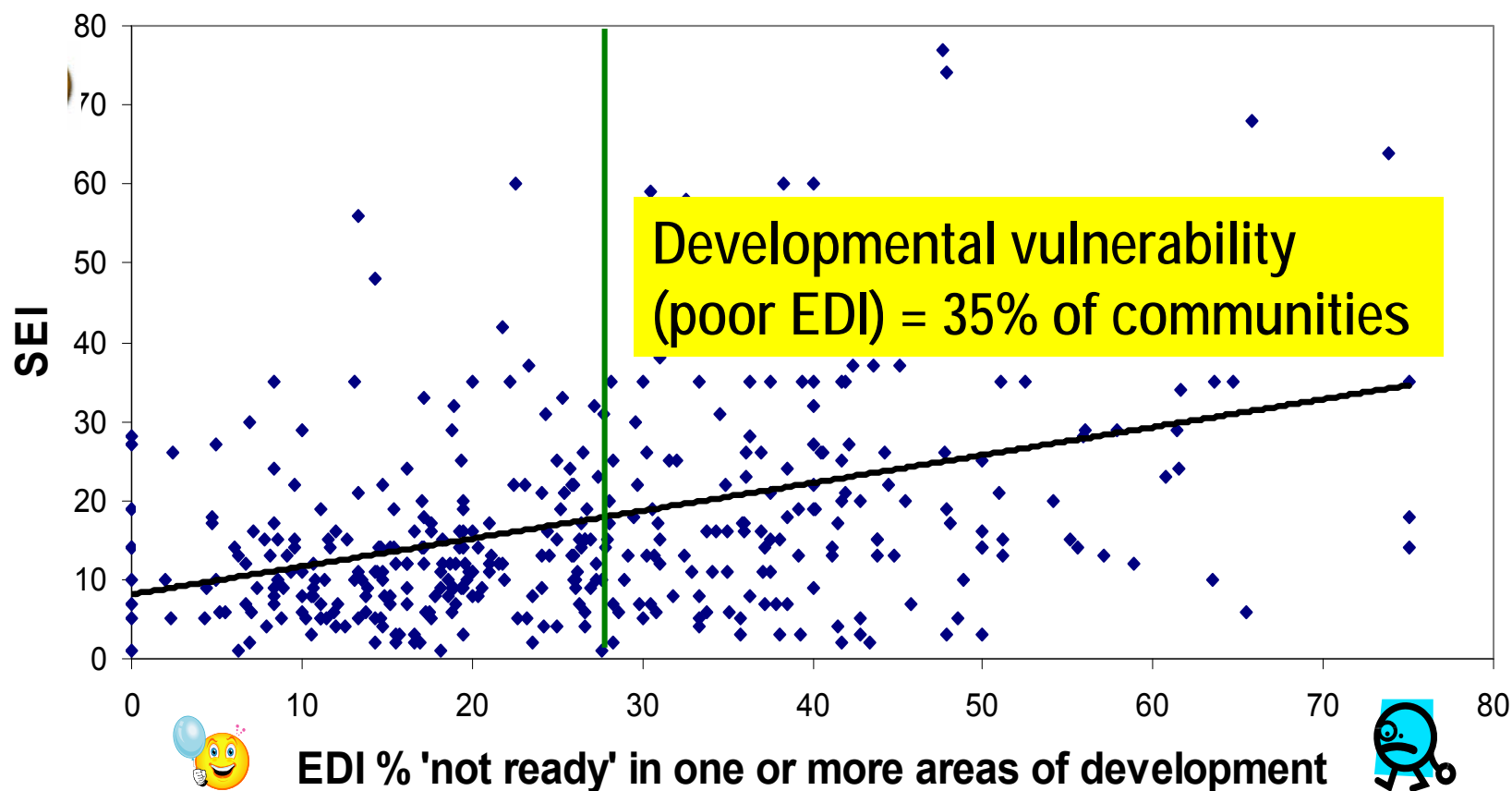
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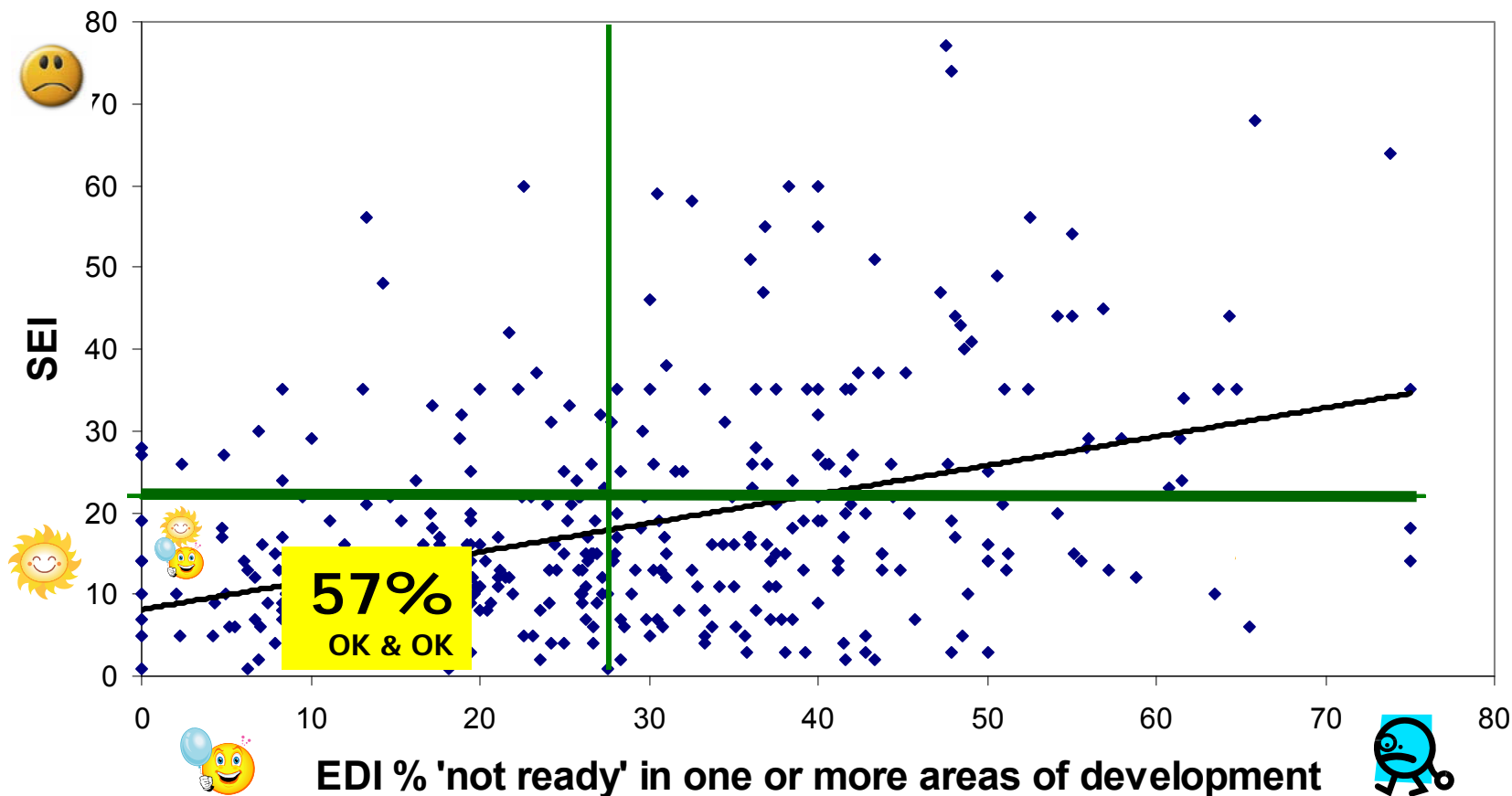
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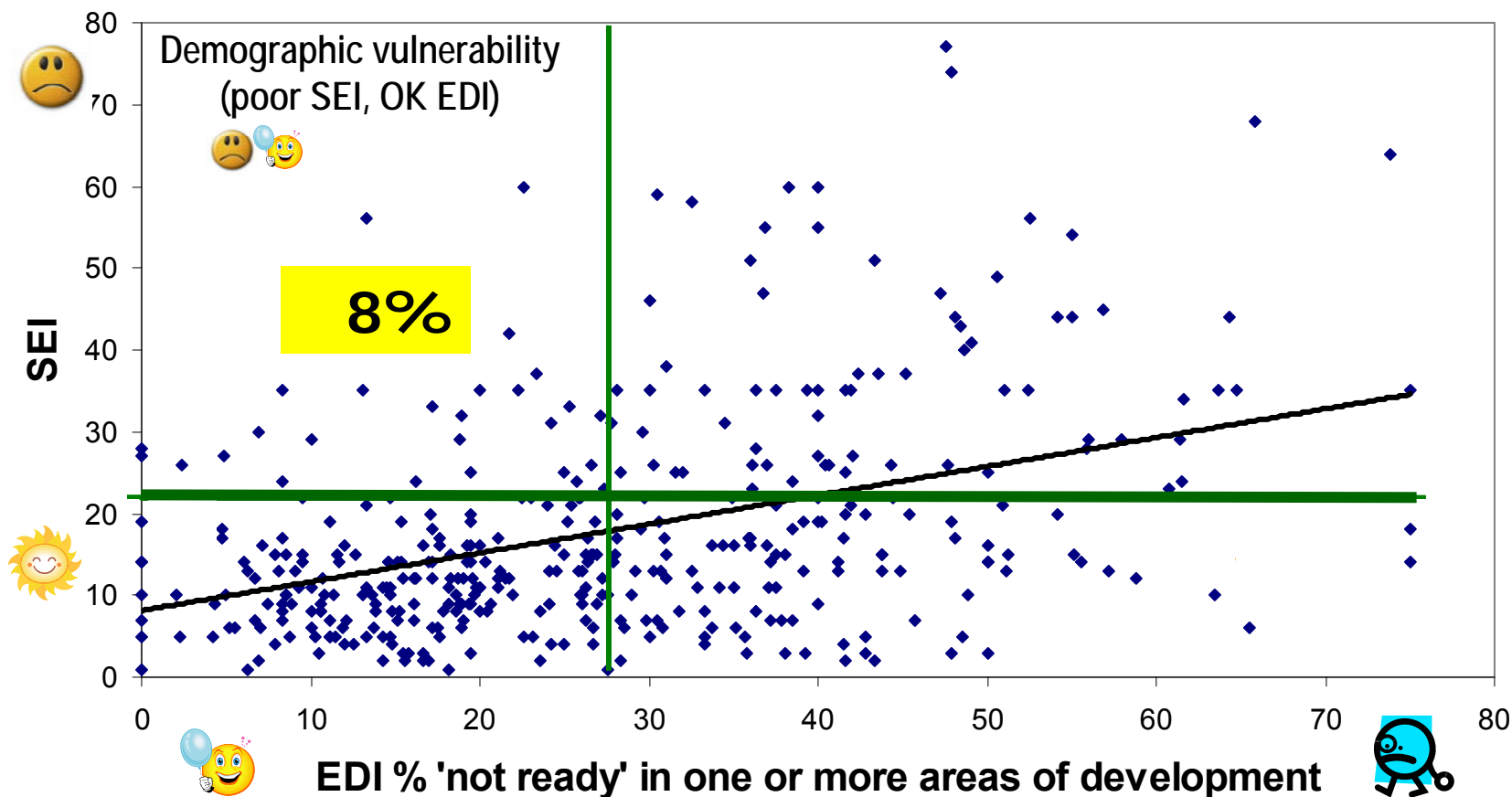
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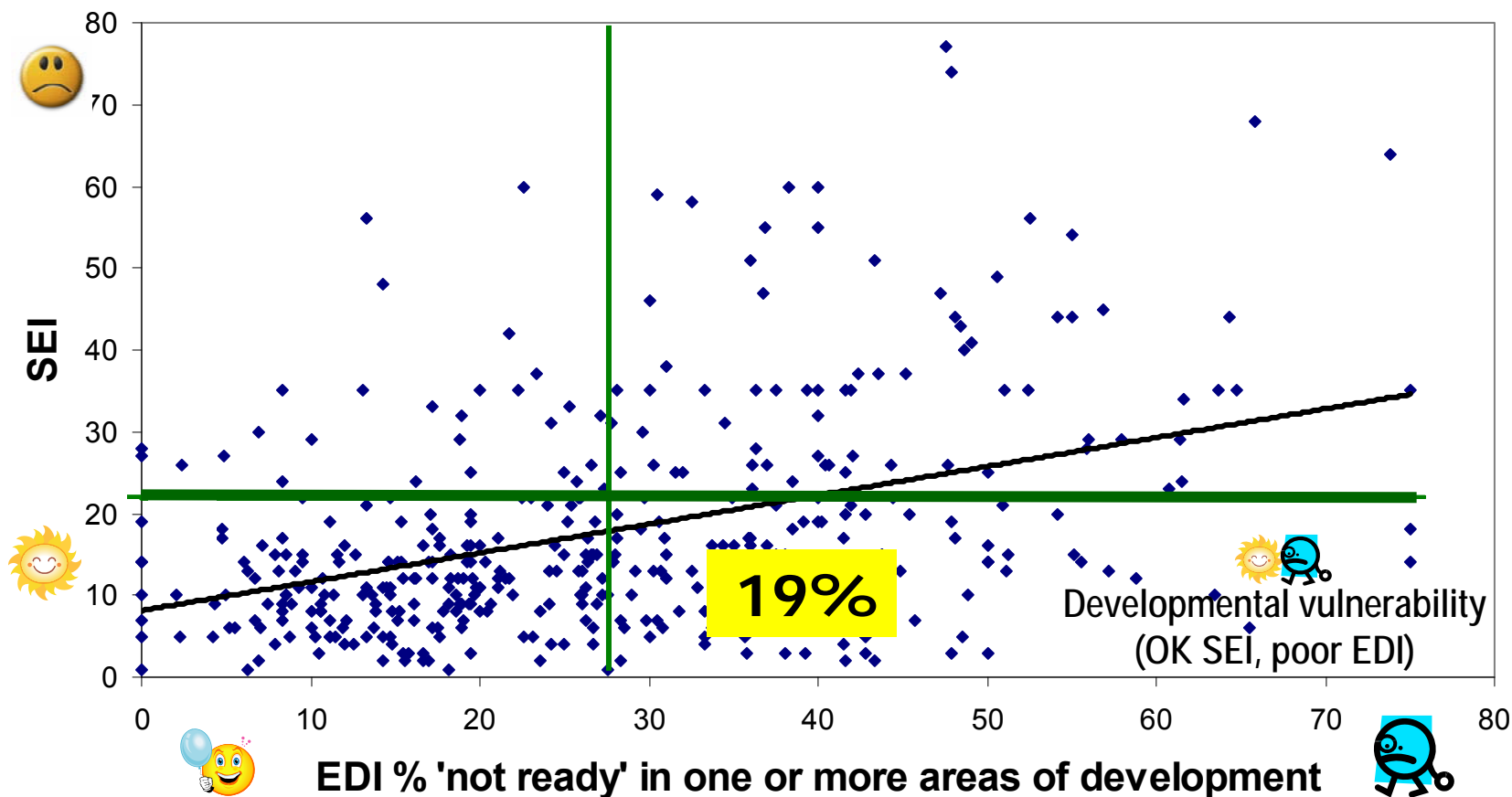
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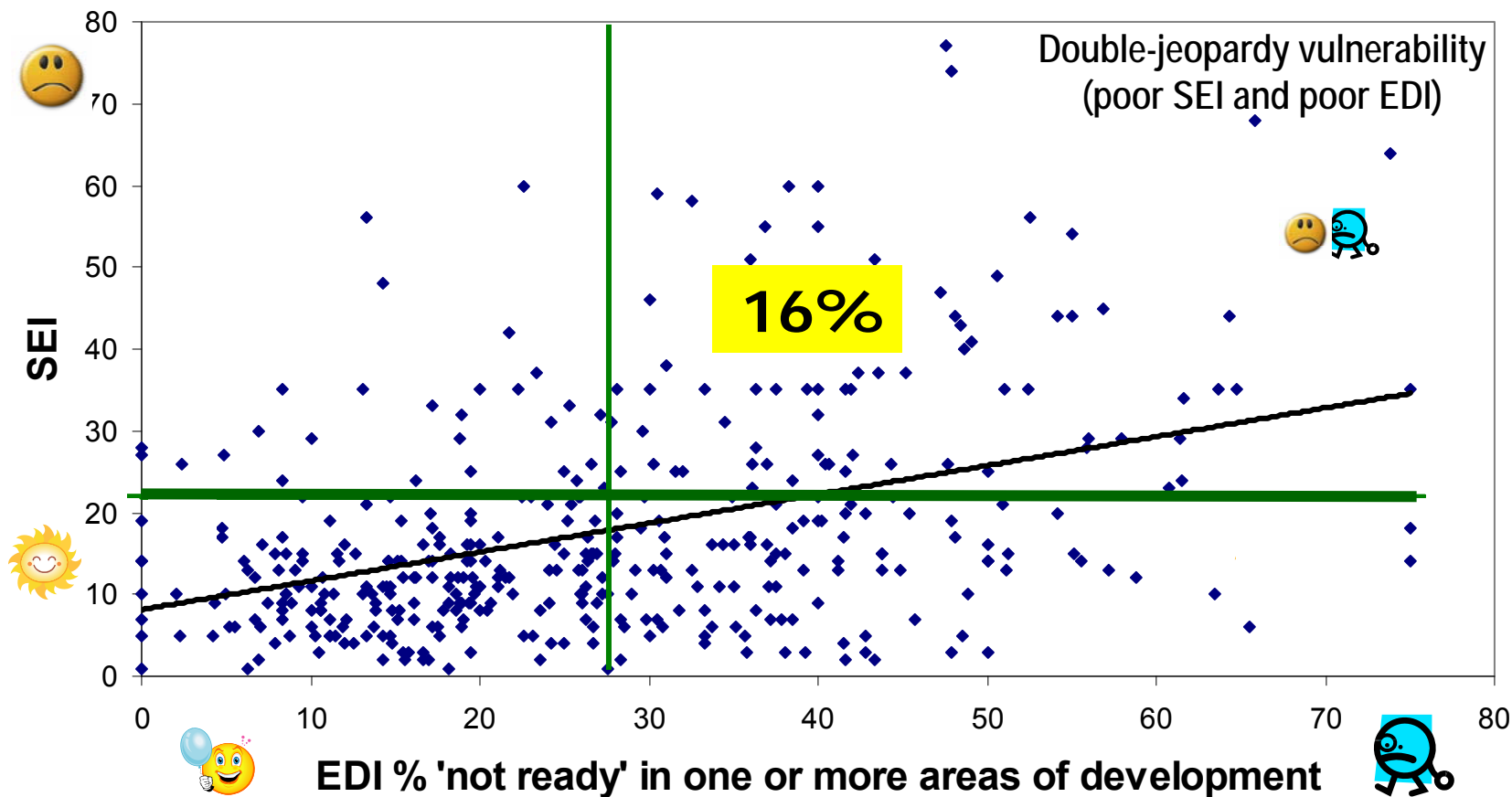
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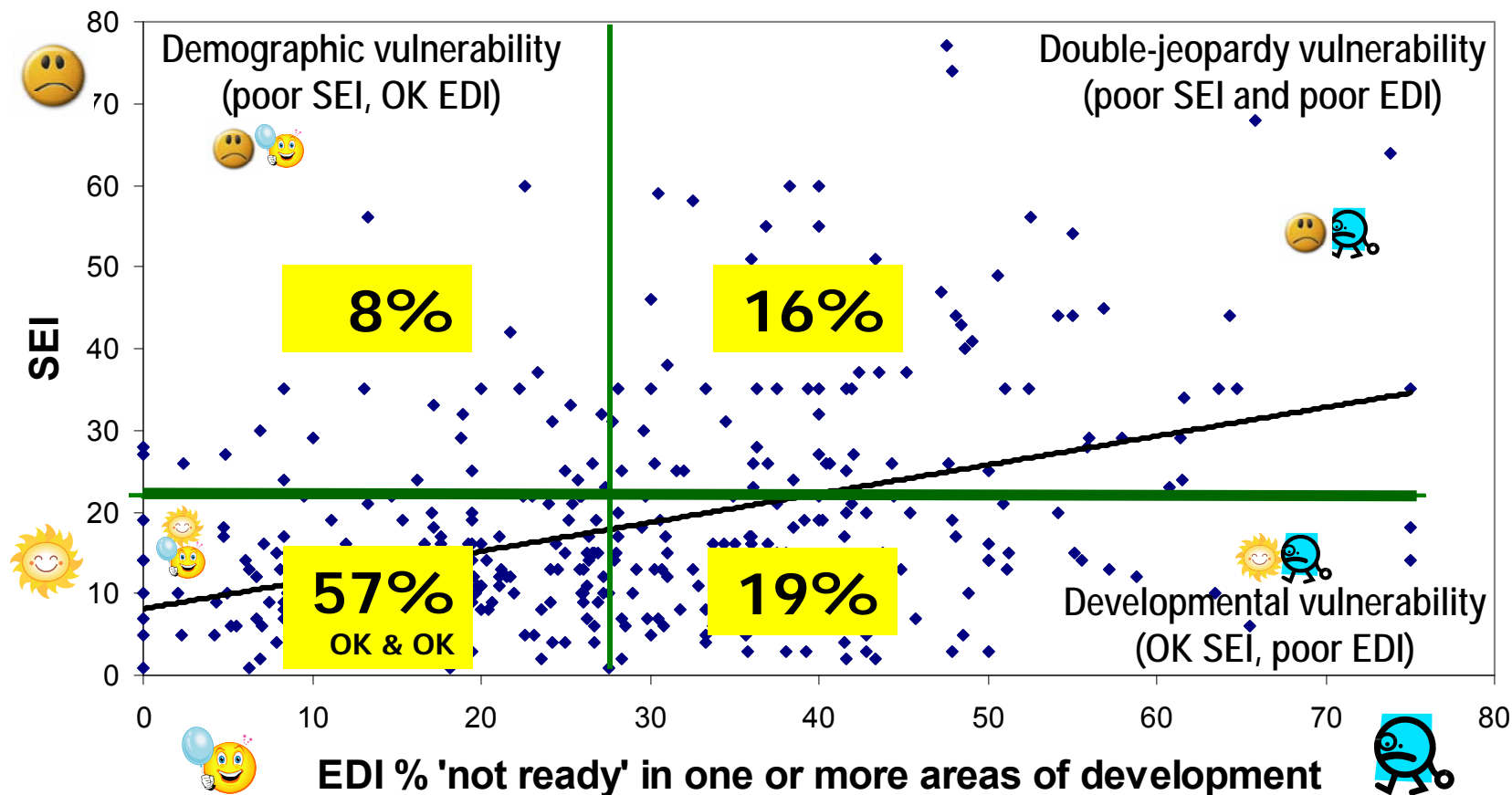
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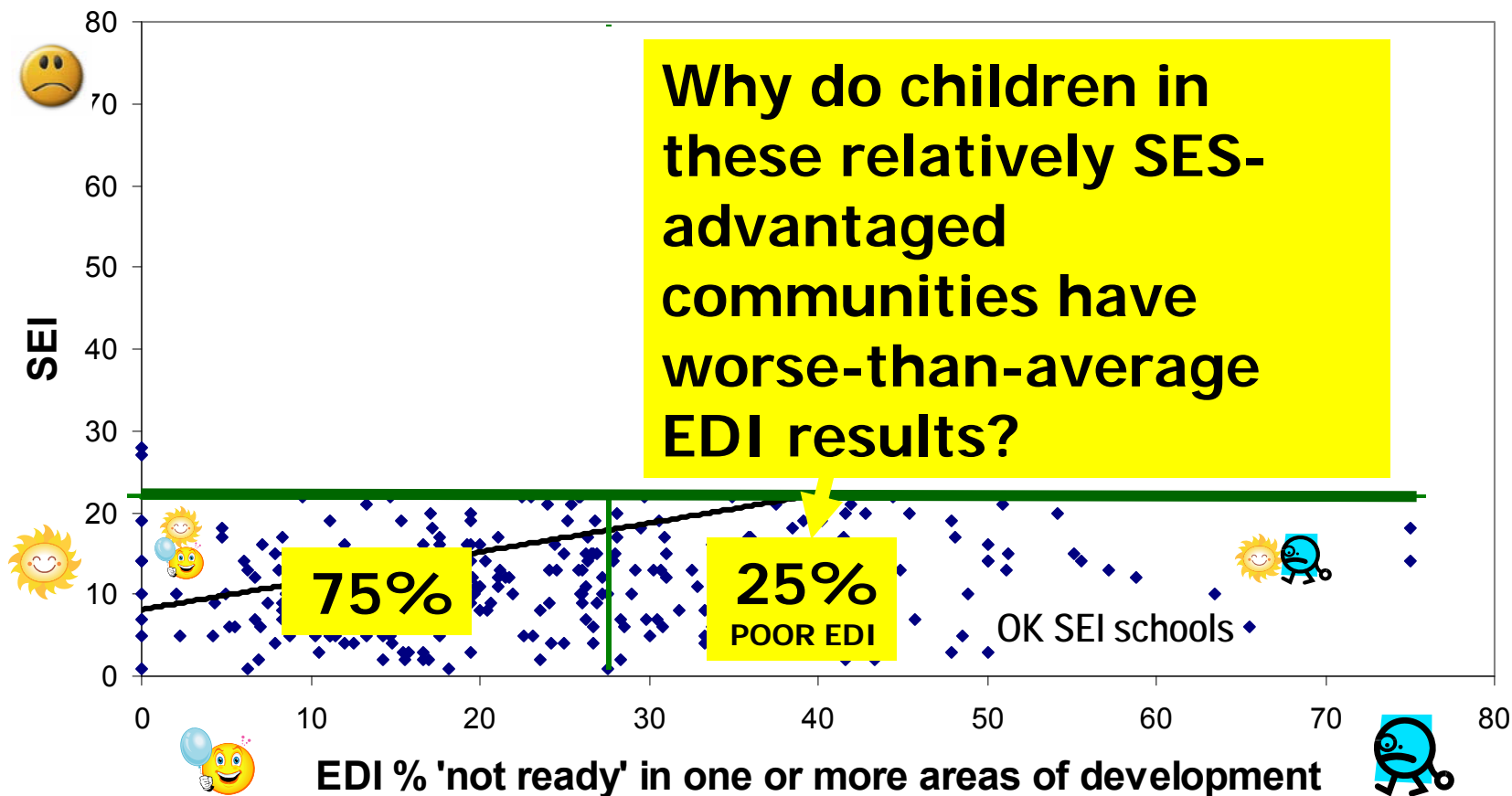
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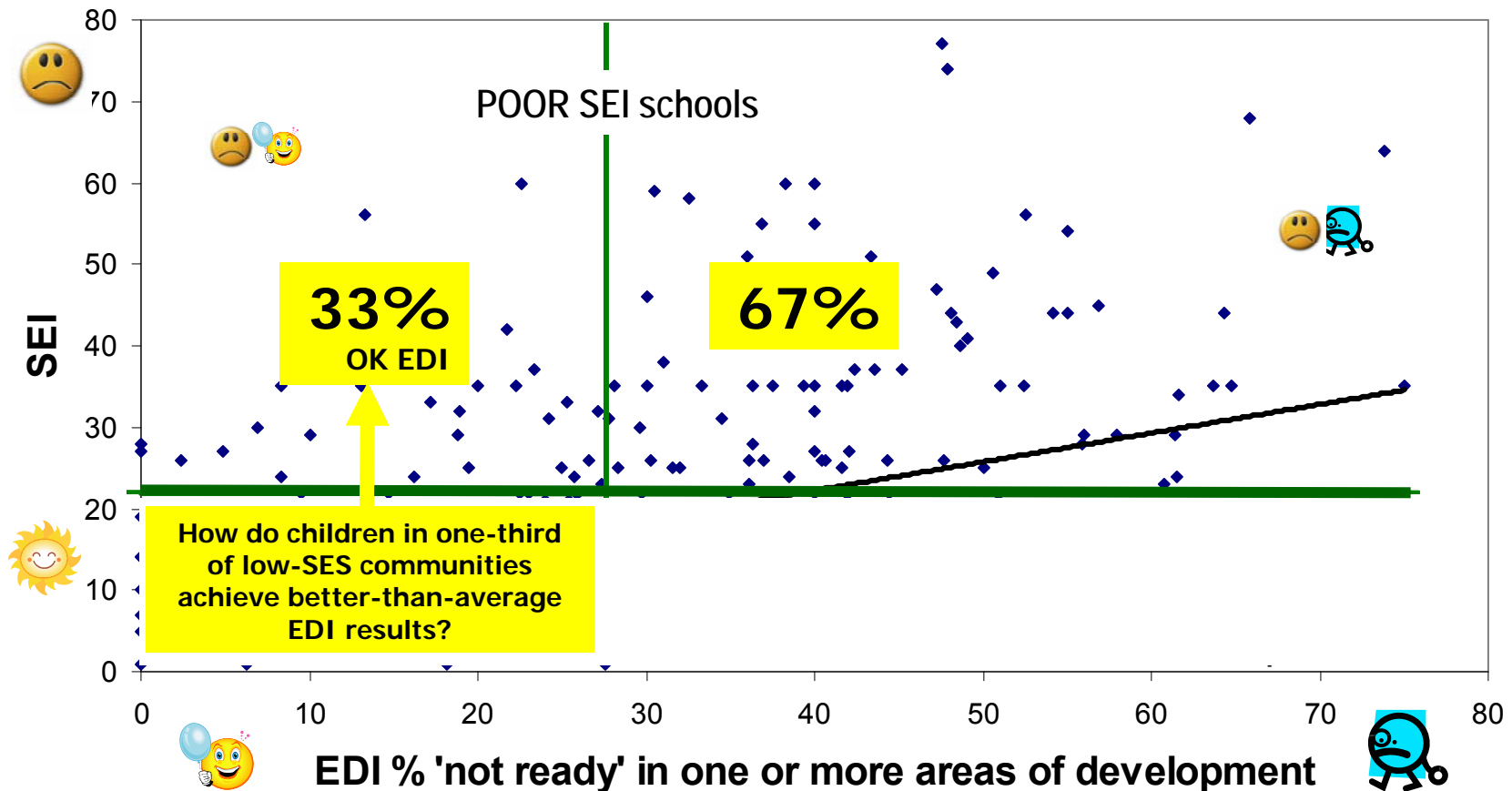
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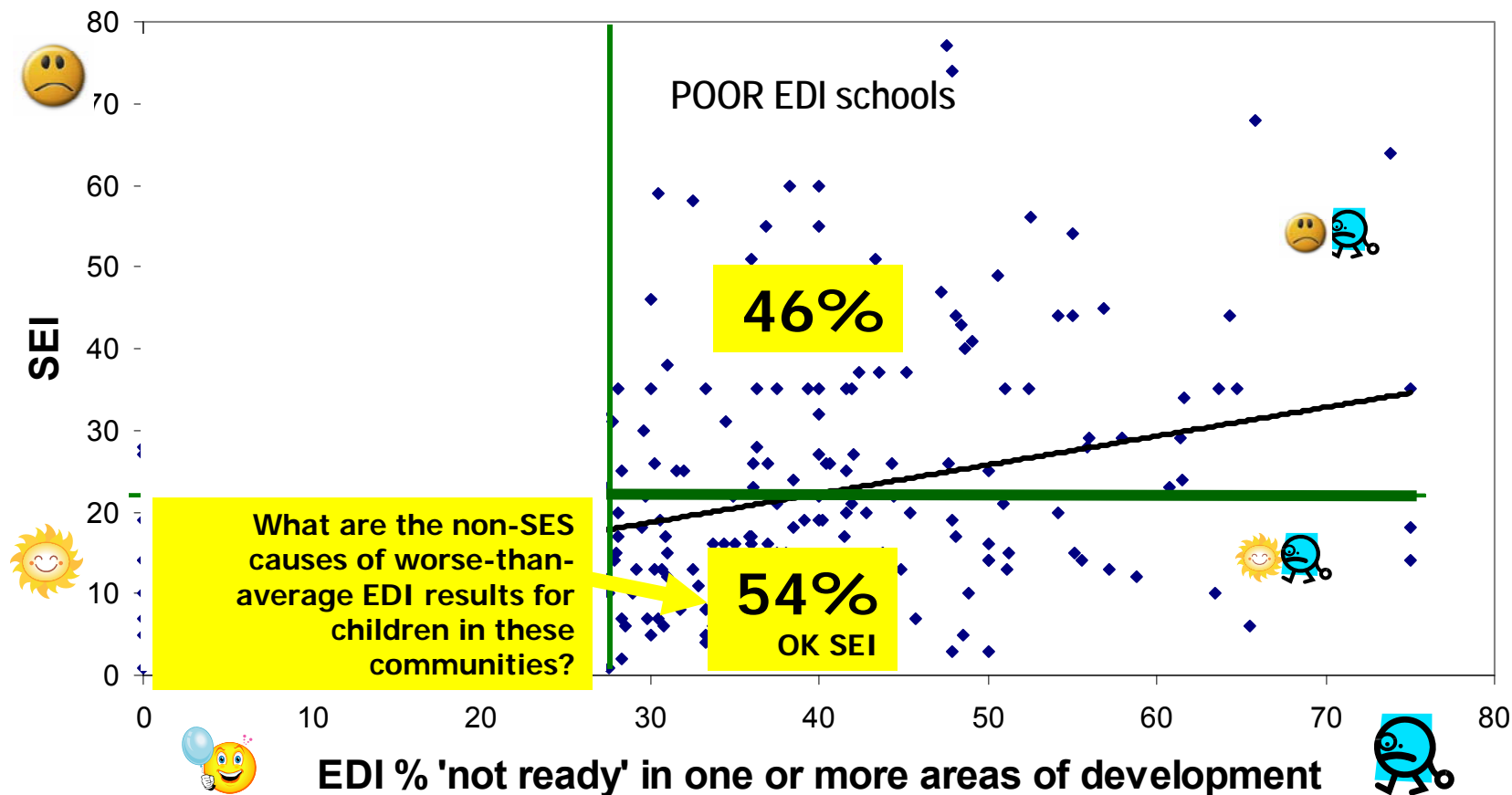


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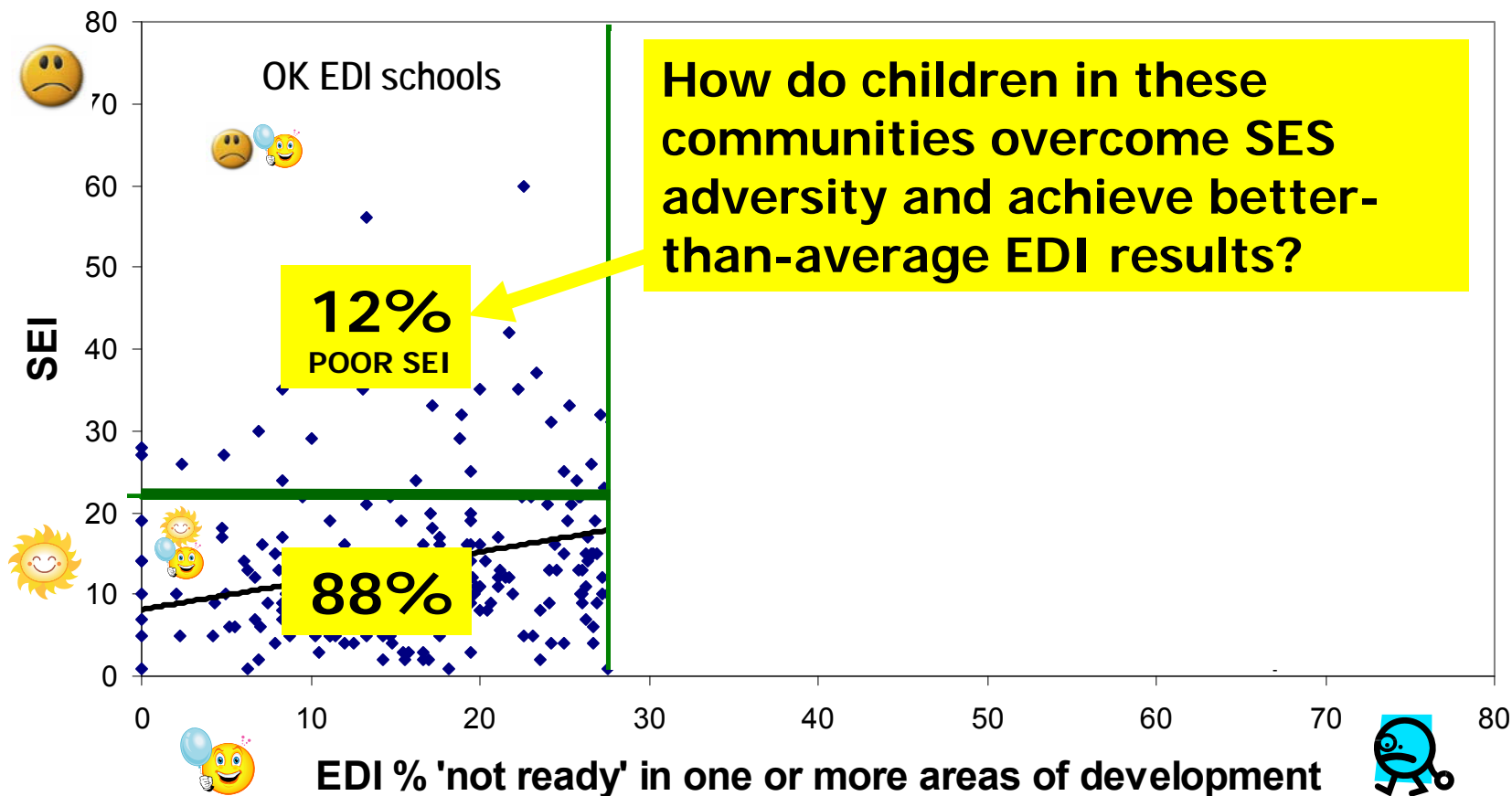


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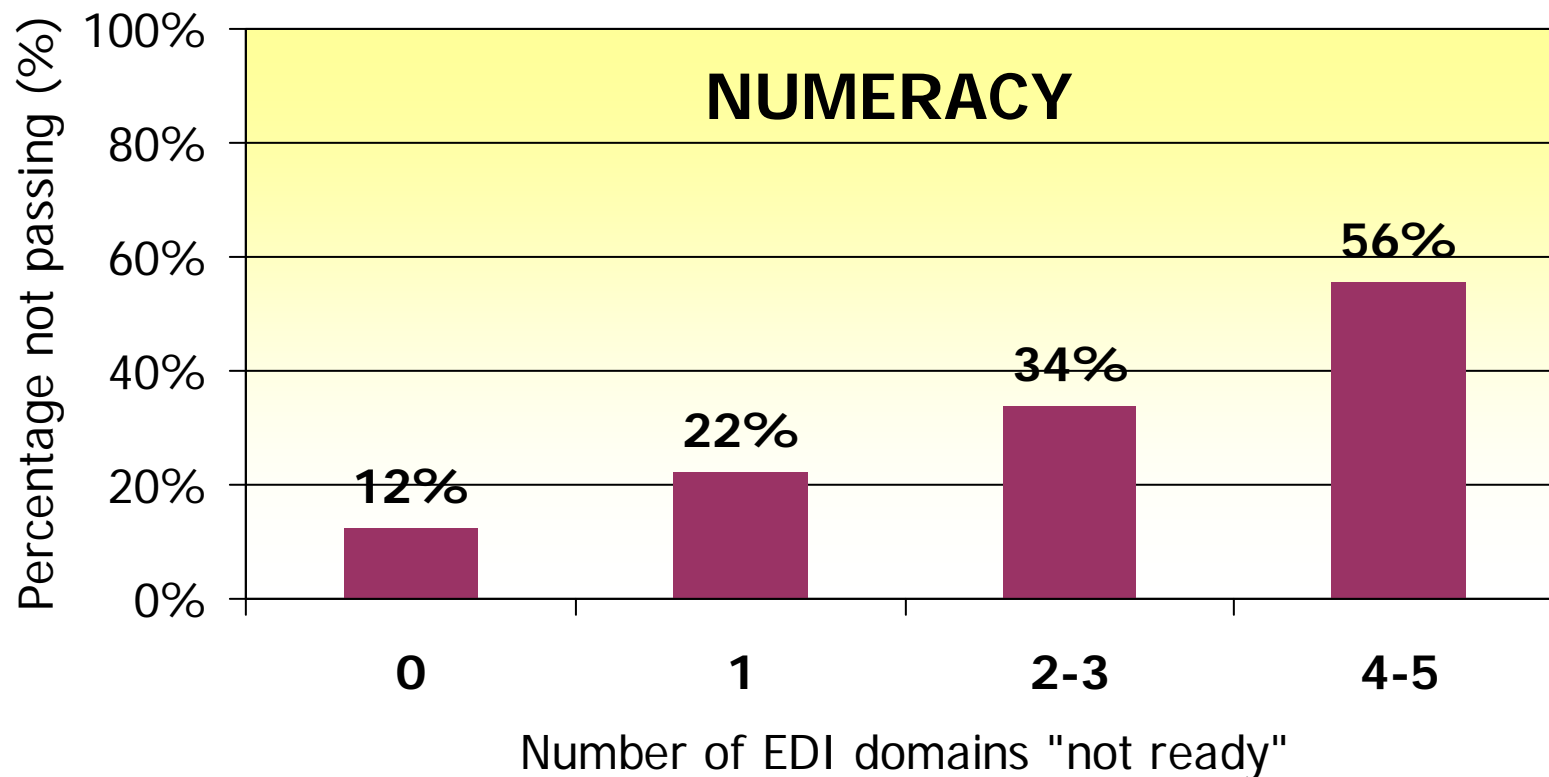


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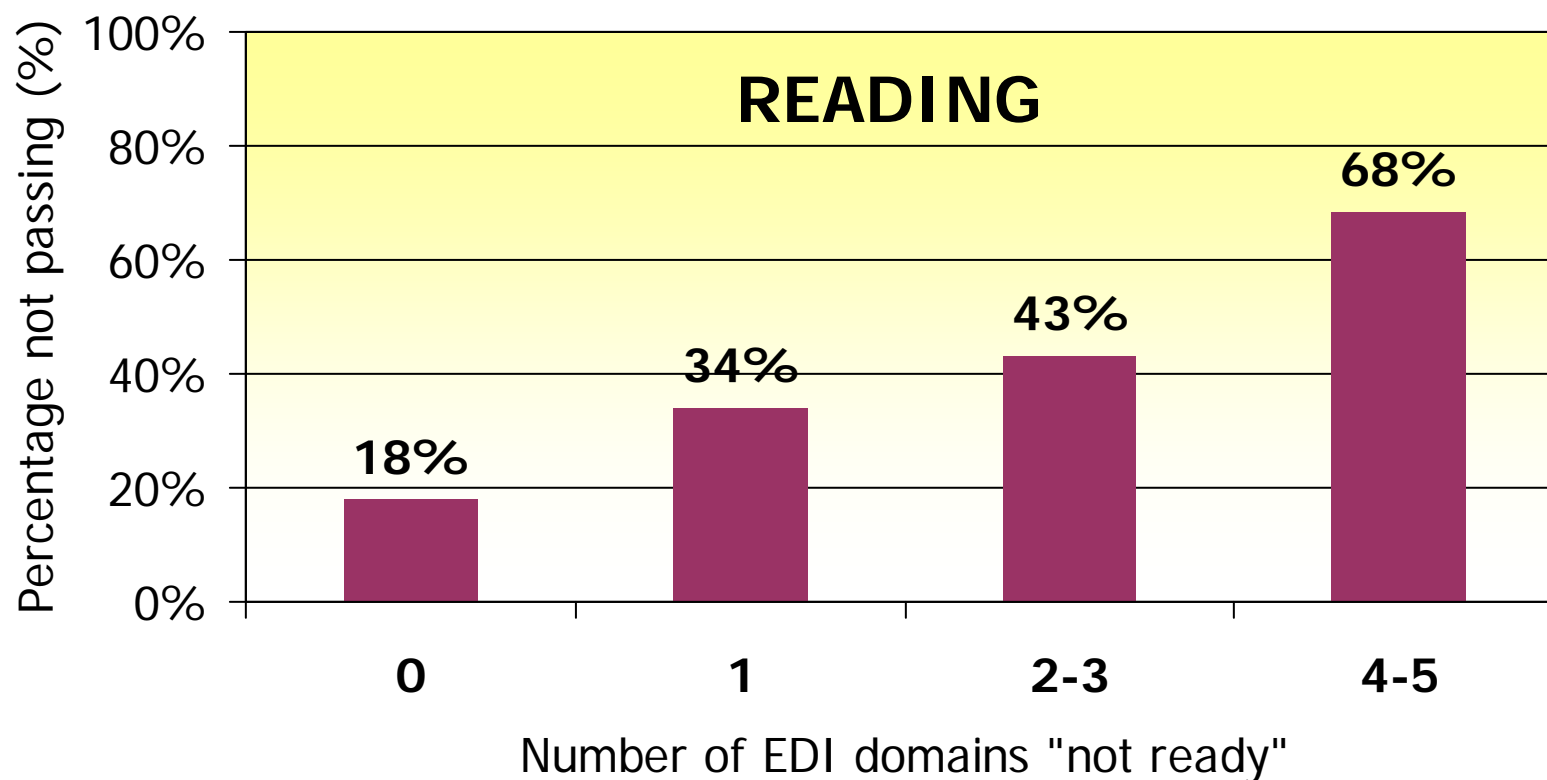
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# Predictive Validity of the EDI: "Not Ready" on the EDI (2000-2001) and Grade 4 Foundational Skills Assessments (FSAs) in British Columbia, 2004-2005

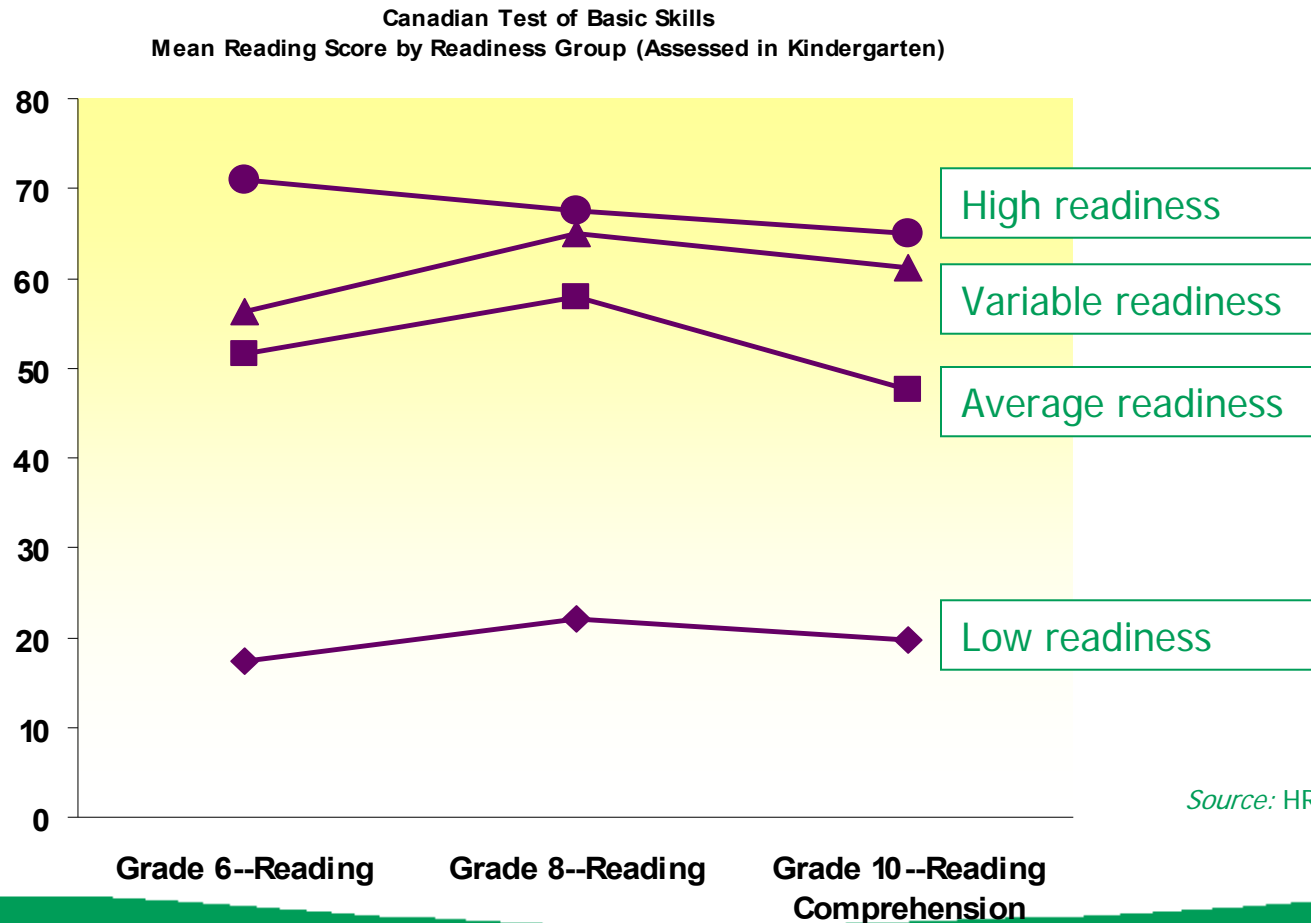


## Predictive Validity of the EDI: "Not Ready" on the EDI (2000-2001) and Grade 4 Foundational Skills Assessments (FSAs) in British Columbia, 2004-2005





# Early Differences in Readiness at School Entry Persist Through to Grade 10



Source: HRDC-ARB (2003).

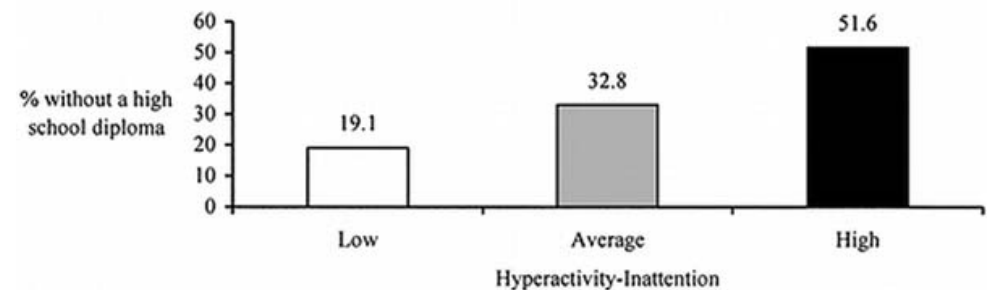
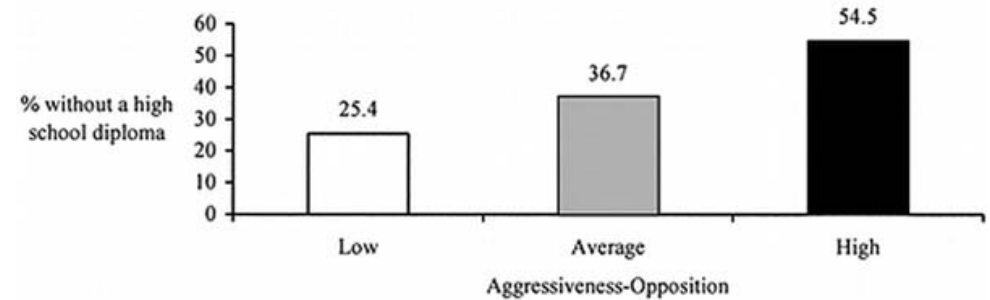
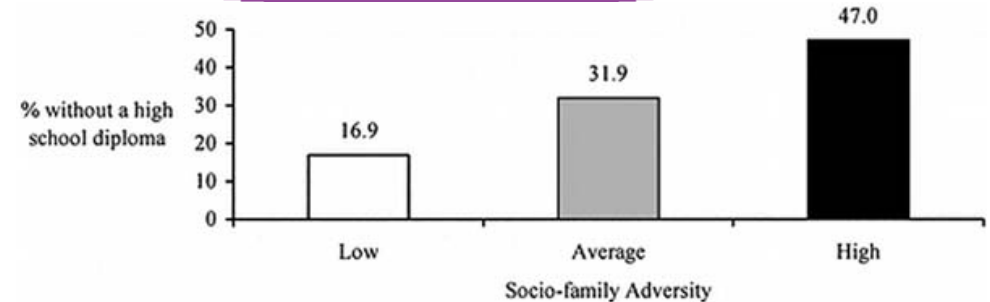
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# Predicting High School Graduation in Kindergarten

- Children's aggression and attention/ hyperactivity problems in Kindergarten (using items similar to those in the EDI) are each associated with 2 to 2.5 times the risk of not completing high school
- This is similar to the magnitude of risk associated with family socioeconomic adversity



Vitaro et al. (2005)

# New Longitudinal Research

## Readiness at school entry and later achievement:

- Early math skills
- Early reading skills
- Early attention skills

(Duncan et al., 2007 – 6 longitudinal data sets; Grimm et al., 2010 – 3 data sets; Hooper et al., 2010 – 2 data sets; Pagani et al., 2010 – replication with QLSCD; Romano et al., 2010 – replication with NLSCY)

## New:

- Early fine motor skills (Grissmer et al., 2010 – 3 data sets; Pagani et al., 2010)
- Early social and emotional behaviours (Grimm et al., 2010; Pagani et al., 2010; Romano et al., 2010)
- Early general knowledge (Grissmer et al., 2010)