The Economic Case for Investing in Young Children

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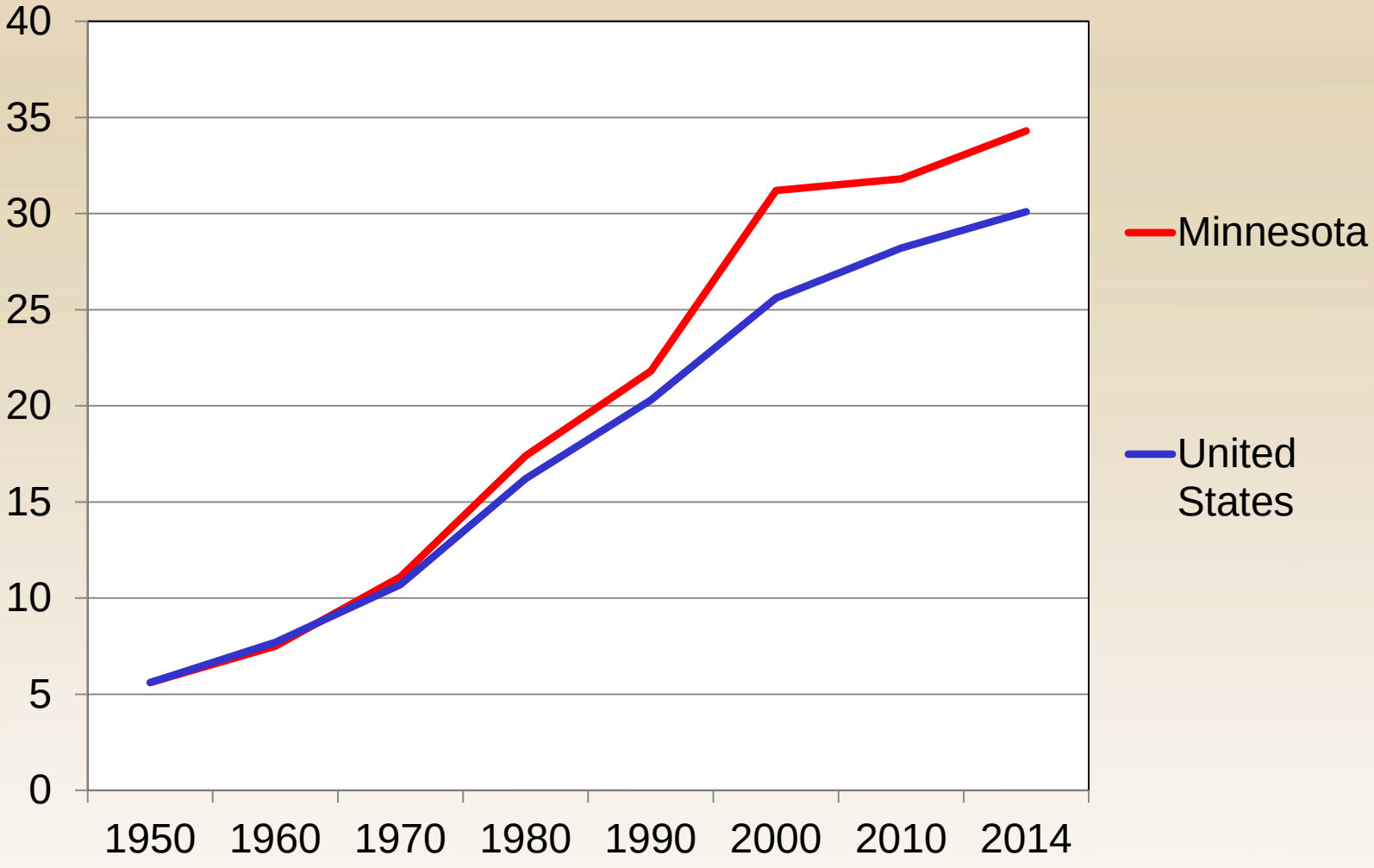
Minnesota's Ranking in Per Capita Personal Income

- 1950s 27th
- 1970s 18th
- 1990s 16th
- 2014 15th

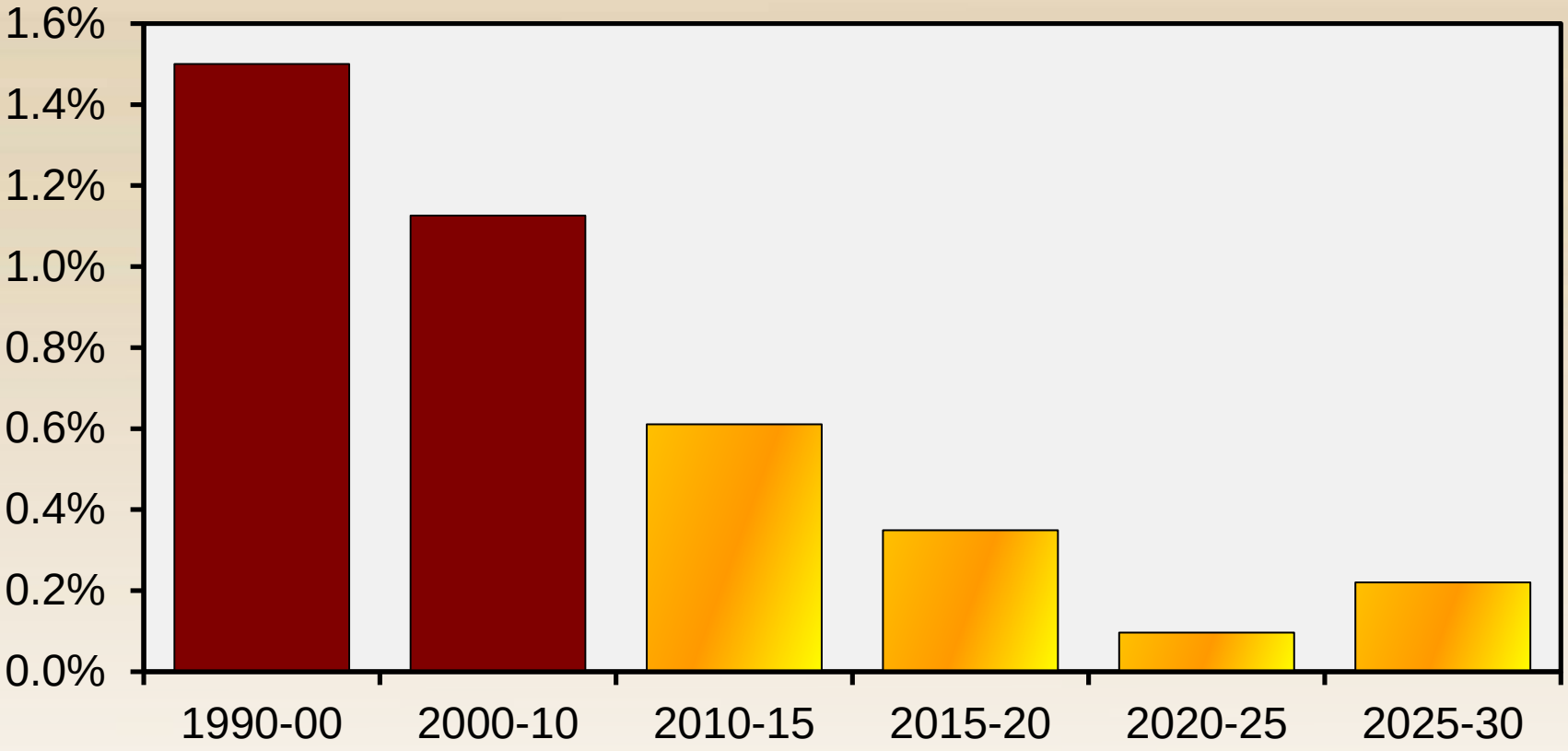
Minnesota's Education Rises

Percent of Adult Population with a College Degree



Source: U.S. Census Bureau

Annual percent change in Minnesota labor force



Source: Minnesota State Demographer

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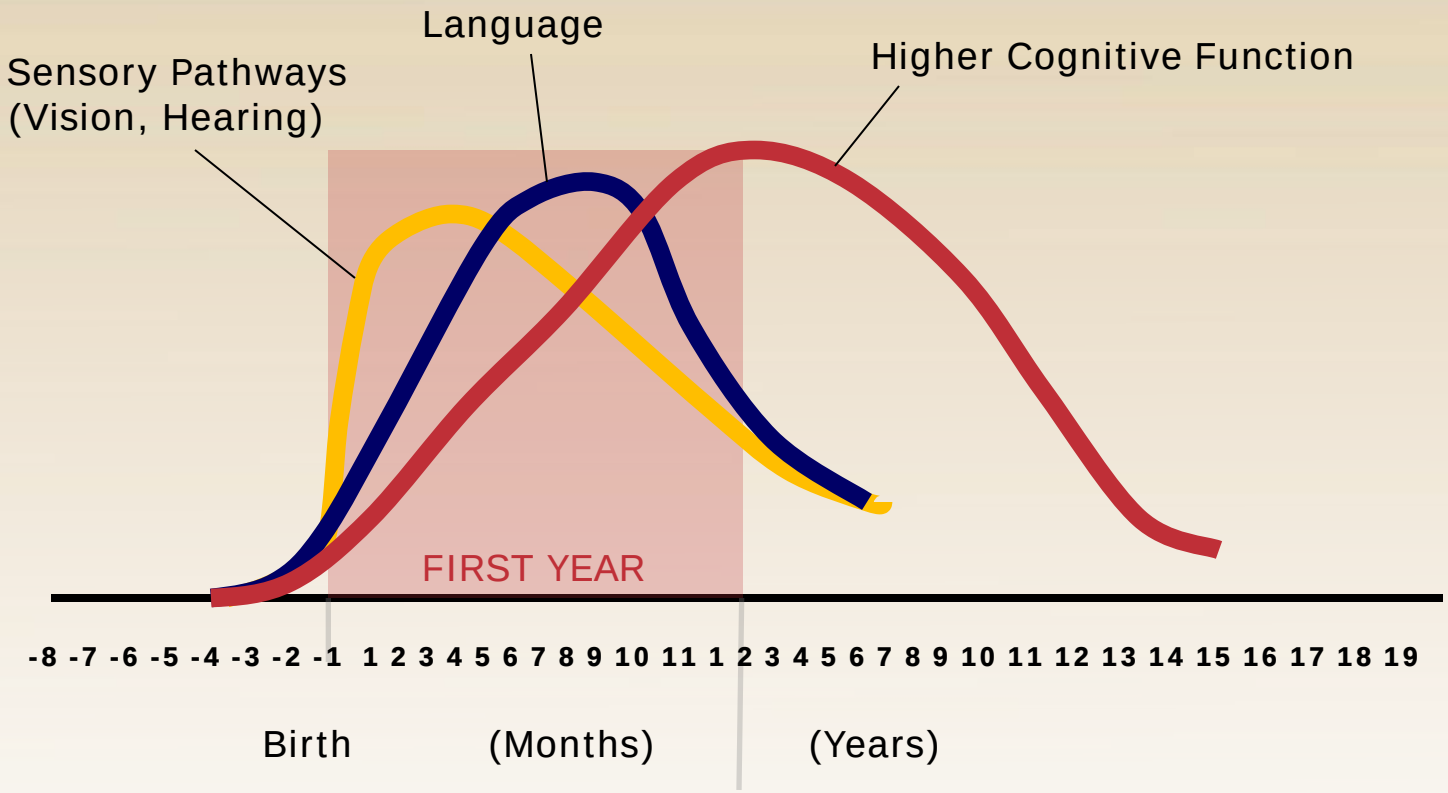
Human Brain Development

Synapse Formation Dependent on Early Experiences

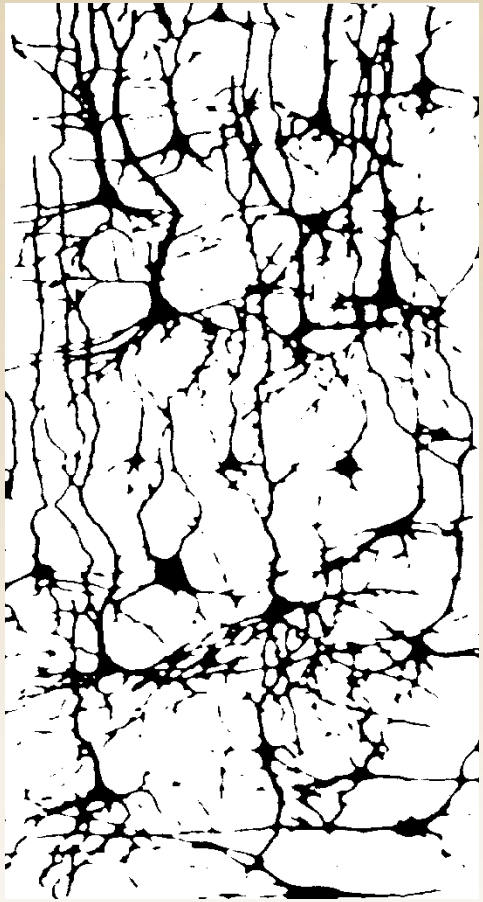


Source: Nelson (2000)

Human Brain at Birth

6 Years Old

14 Years Old



Source: Chugani, Phelps & Mazziotta (1987)

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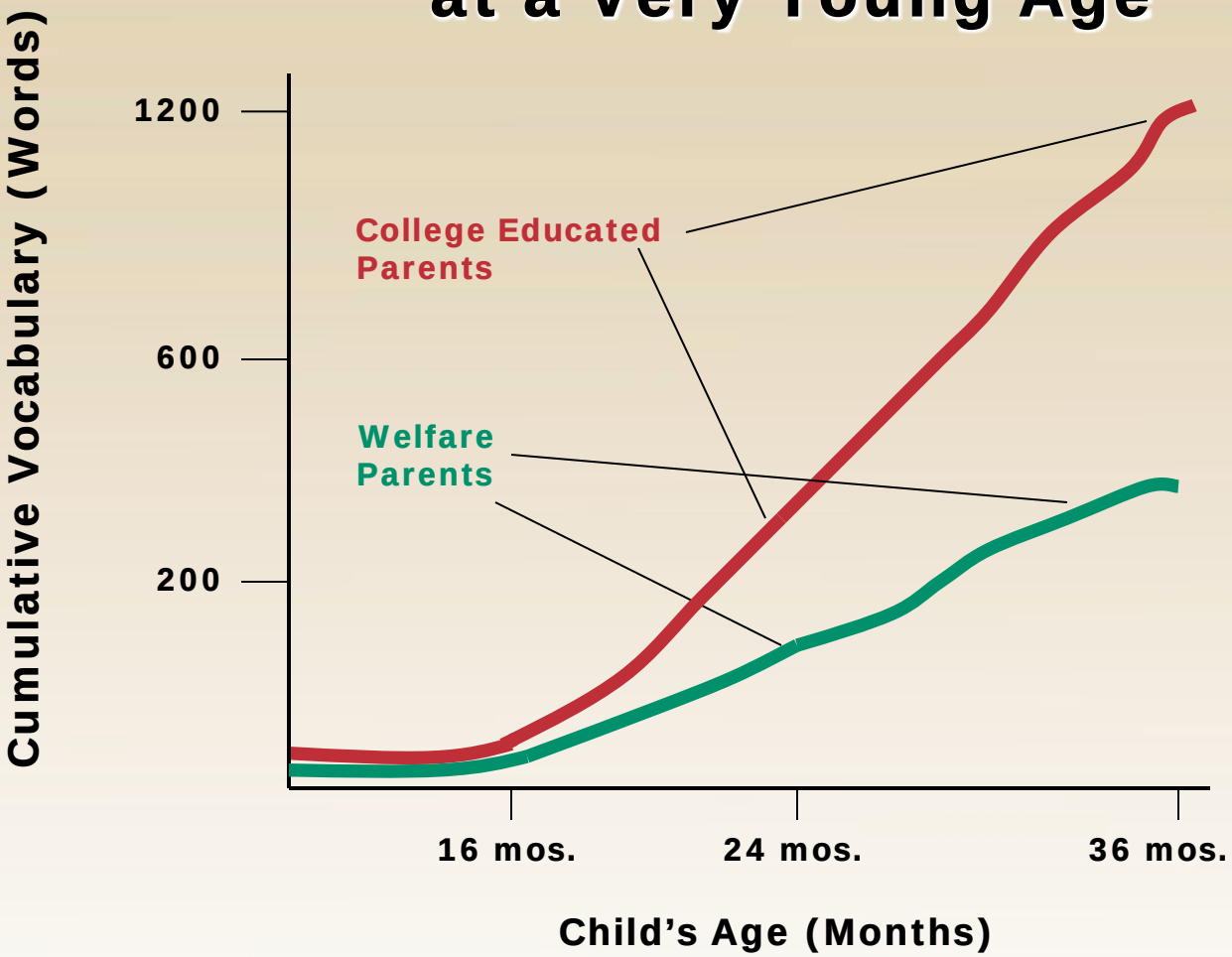
Barriers to Social Mobility Emerge at a Very Young Age



Source: Hart & Risley (1995)

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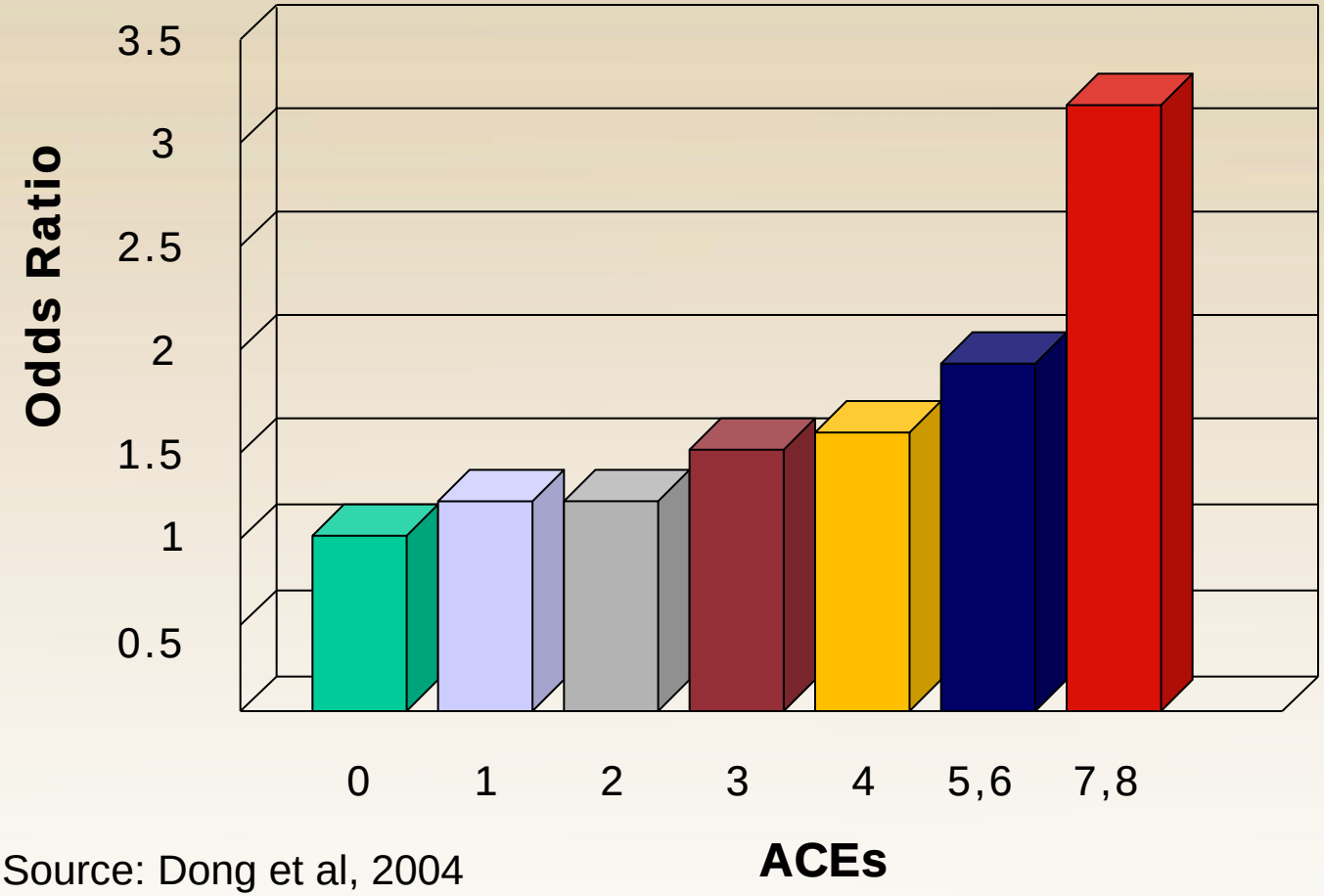
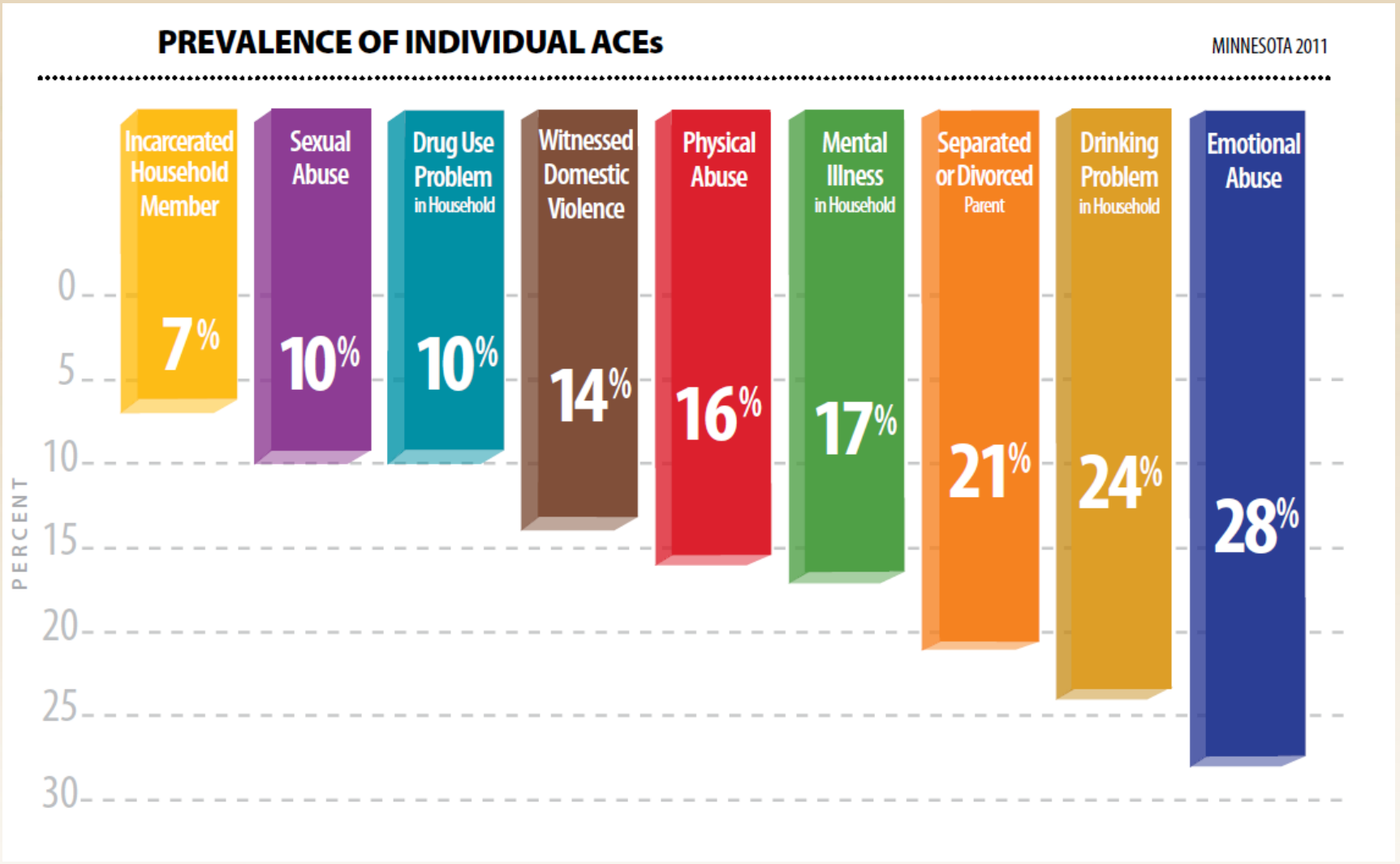
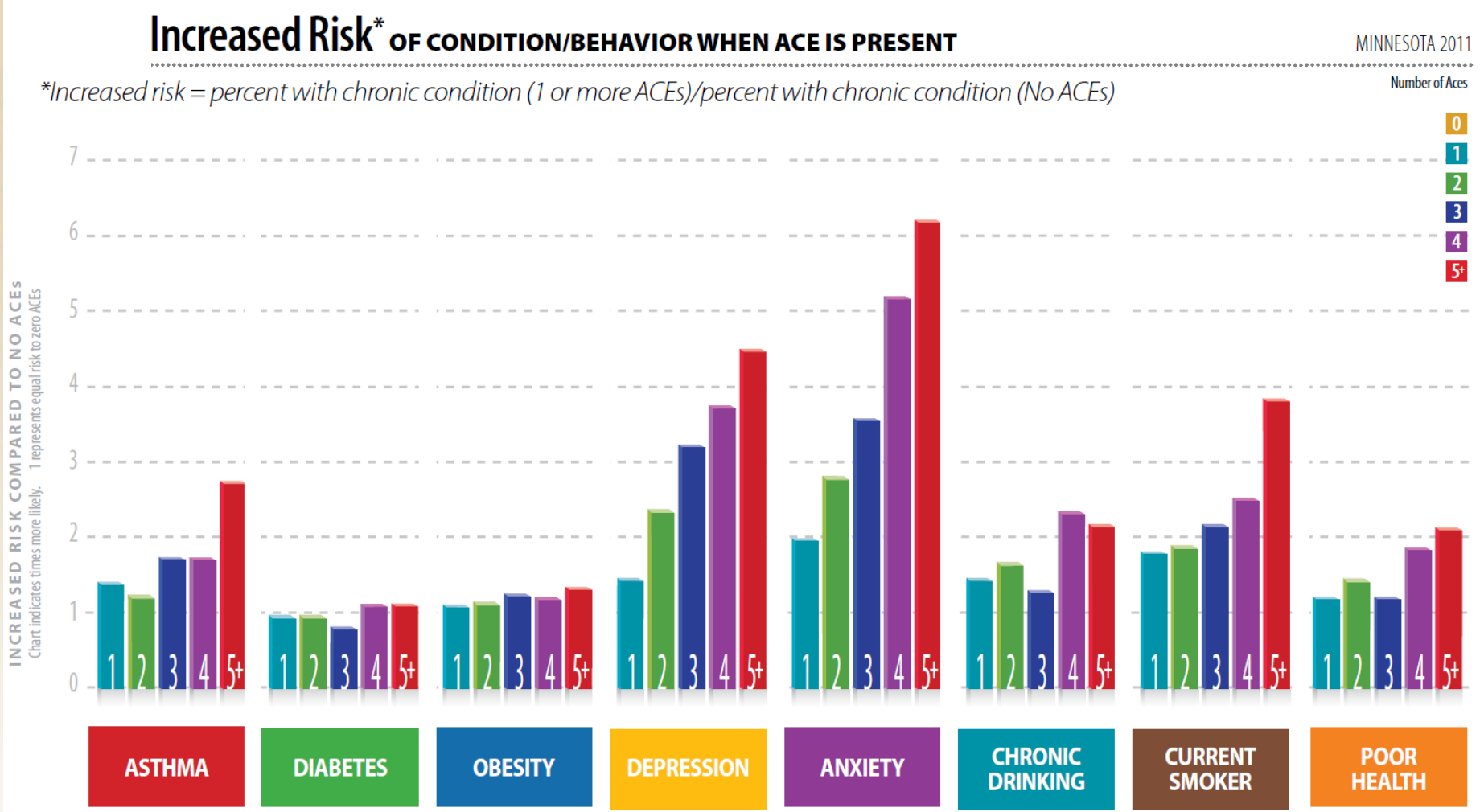
Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences



Source: Dong et al, 2004



Source: Minnesota Department of Health (2013)

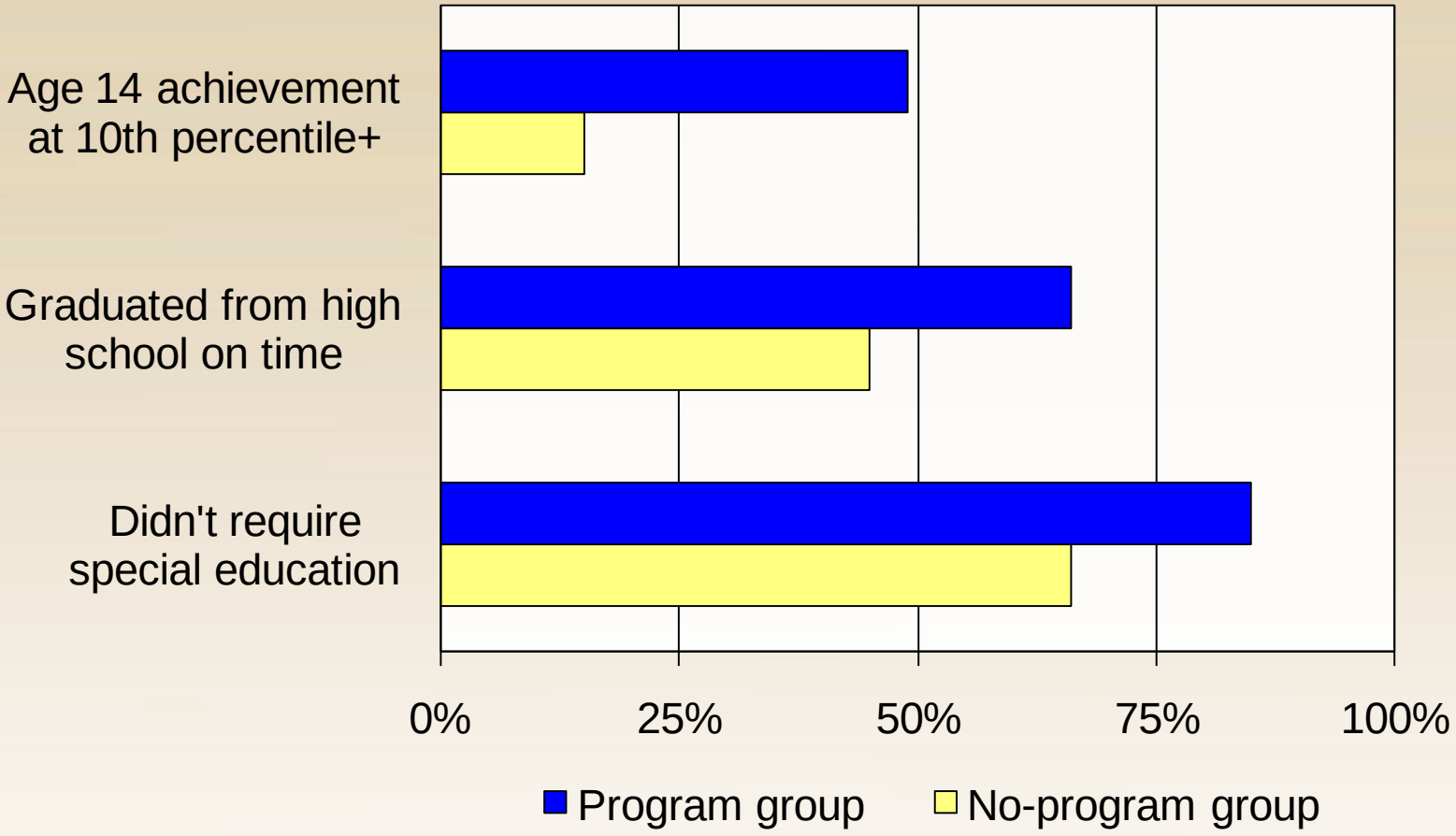


Source: Minnesota Department of Health (2013)

High/Scope Study of Perry Preschool

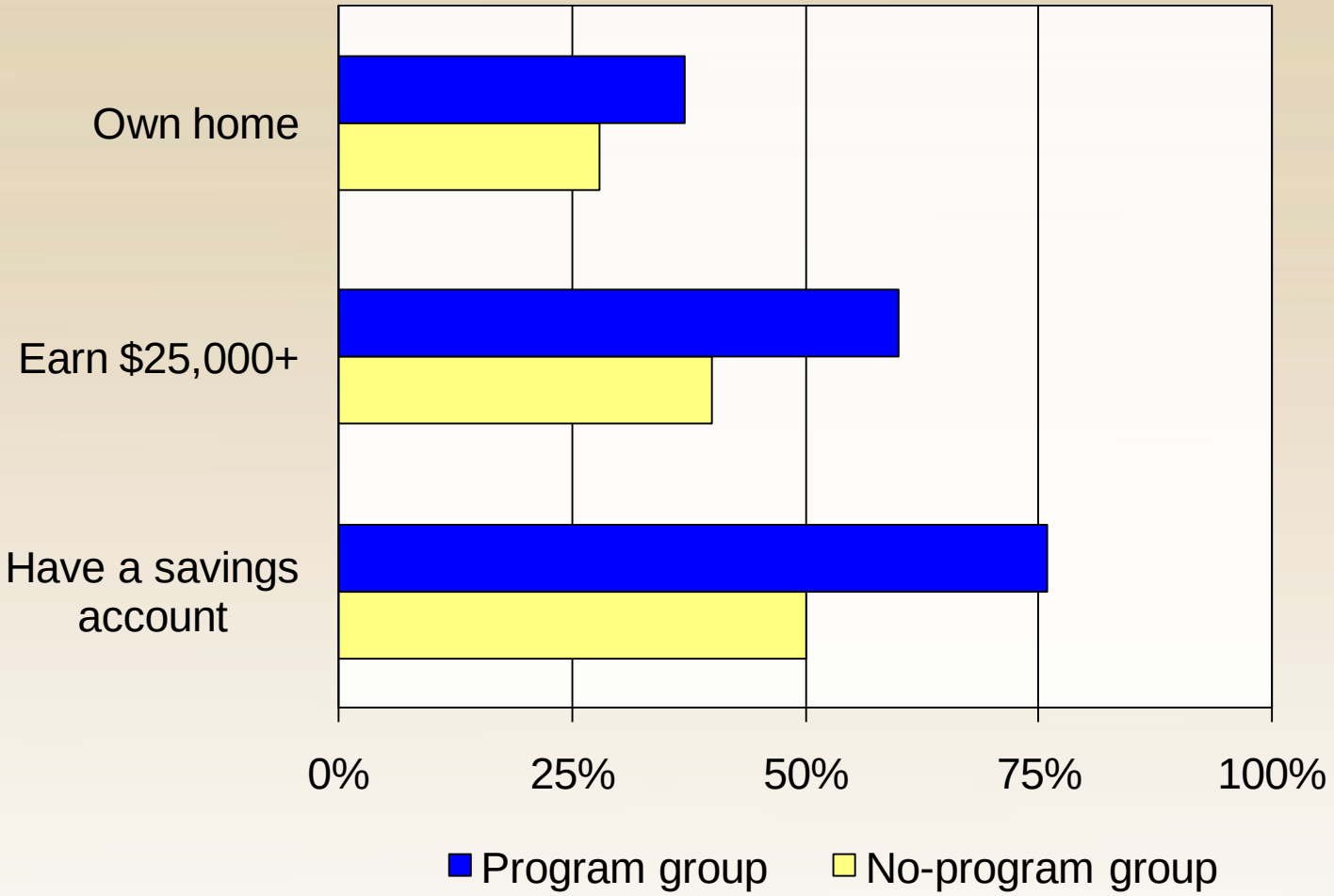
- In early 1960s, 123 children from low-income families in Ypsilanti, Mich.
- Children randomly selected to attend Perry or control group.
- High-quality program with well-trained teachers, daily classroom sessions and weekly home visits.
- Tracked participants and control group through age 40.

Perry: Educational Effects



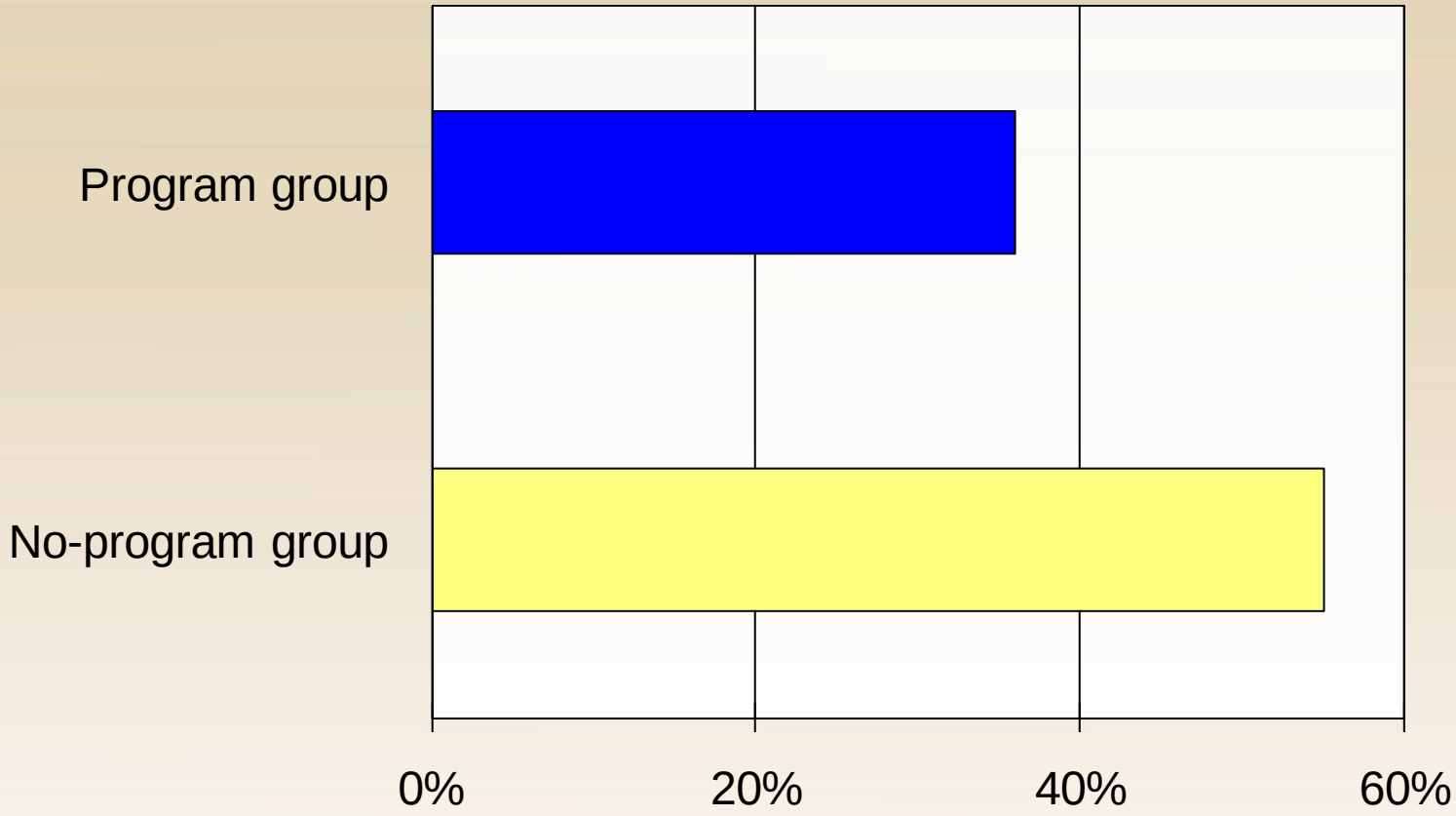
Source: Schweinhart, et al. (2005)

Perry: Economic Effects at Age 40



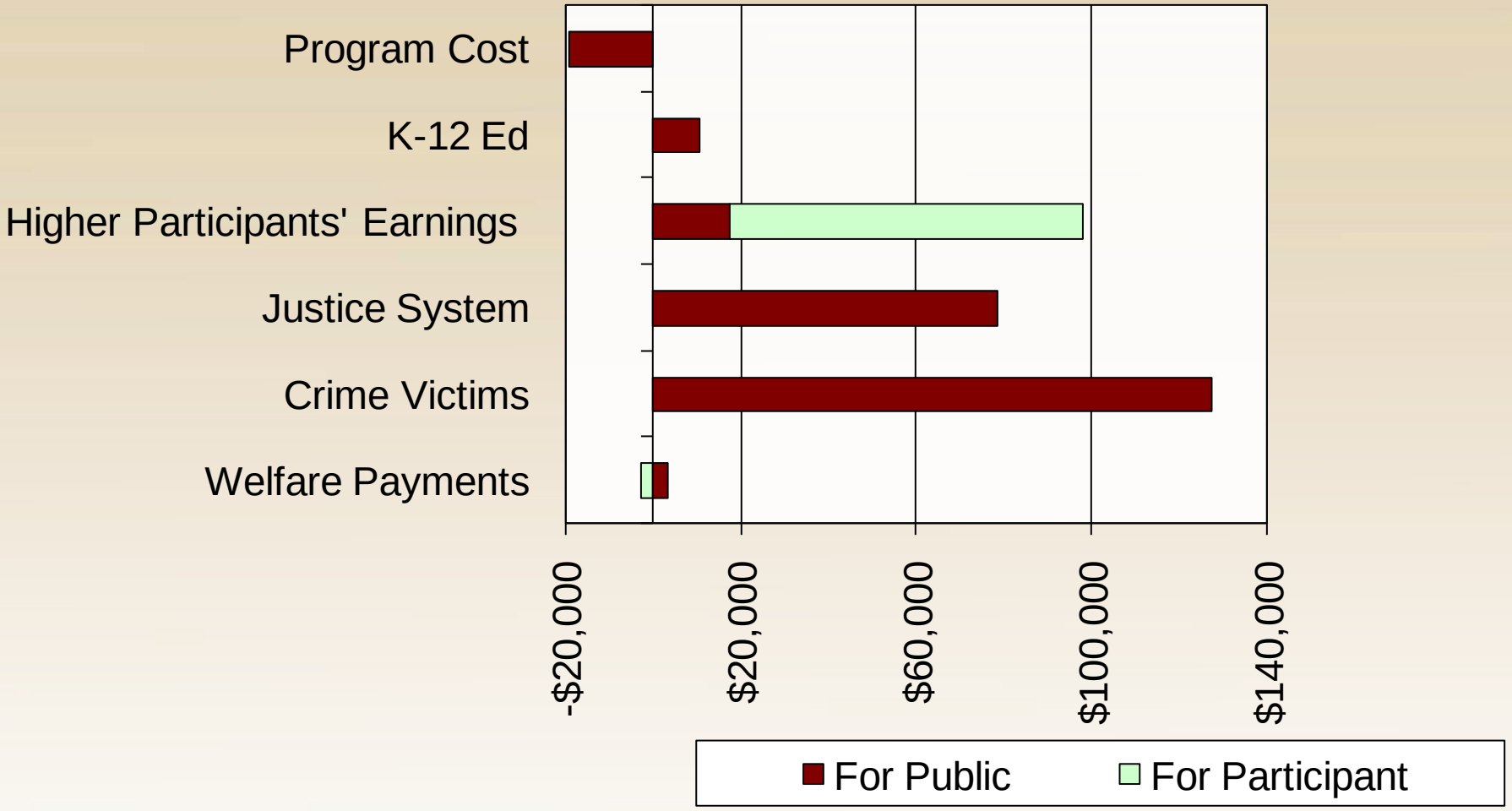
Source: Schweinhart, et al. (2005)

Perry: Arrested 5 or More Times Before Age 40



Source: Schweinhart, et al. (2005)

Perry Preschool
Costs and Benefits Over 62 Years



Source: Schweinhart, et al. (2005)

Perry Preschool — Estimated Return on Investment

- Benefit-Cost Ratio = $16 to $1
- Annual Rate of Return = 18%
- Public Rate of Return = 16%
- Heckman Reanalysis = 10%

Sources: Schweinhart, et al. (2005); Author's calculations; Heckman, Moon, Pinto, Savelyez, & Yavitz (2010)

Benefit-Cost Ratios for Other Longitudinal Studies

- Abecedarian Educational Child Care
  - $4 to $1
- Chicago-Child Parent
  - $10 to $1
- Elmira Prenatal/Early Infancy Project
  - $5 to $1

Sources: Masse & Barnett (2002); Reynolds, Temple, White, Ou, & Robertson (2011); Karoly, et al (1998)

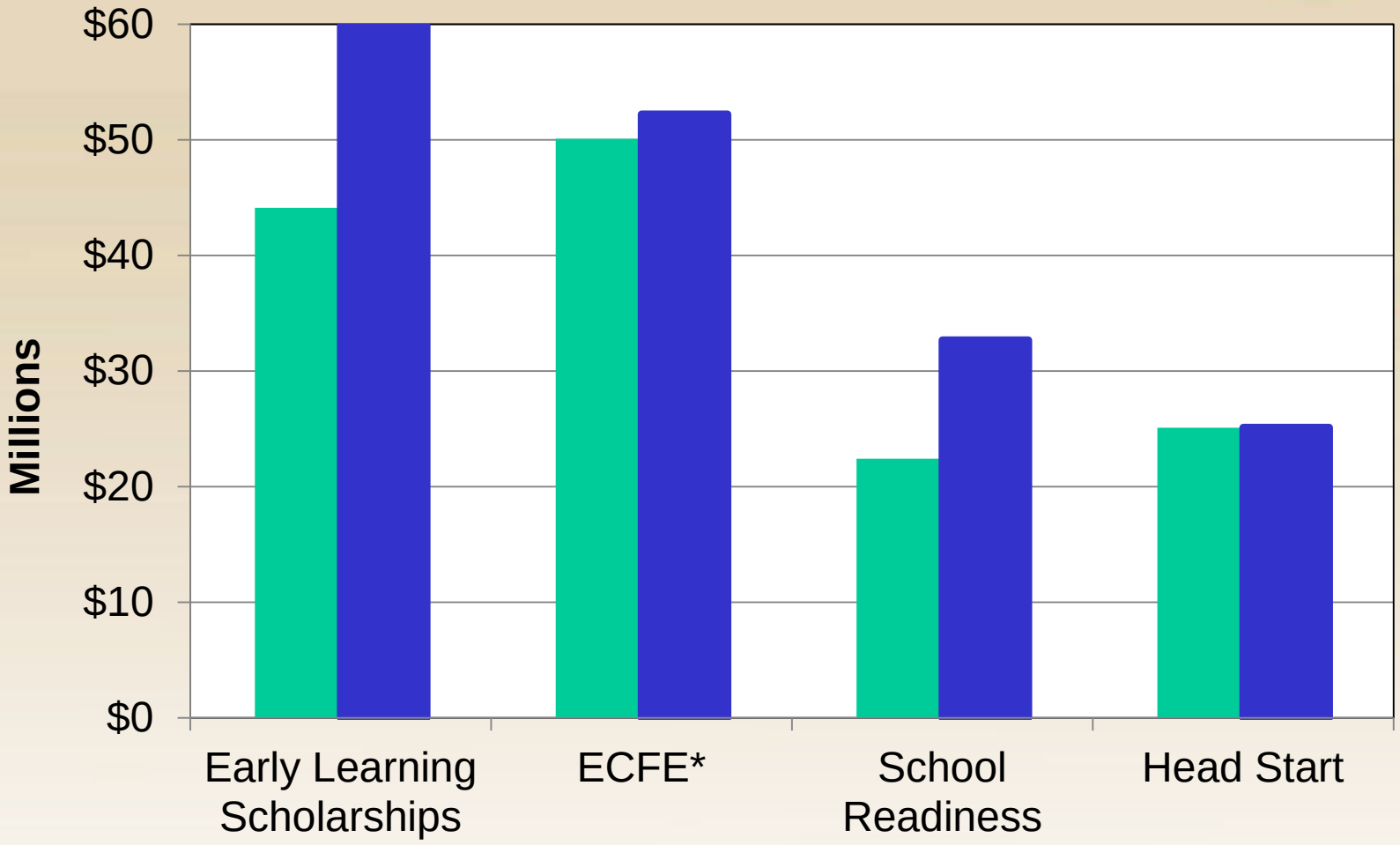
Recent research findings

- State preschool program studies show positive gains in emerging literacy and math skills
- Evaluations of Head Start and Early Head Start show positive impact on development with mixed findings regarding persistence
- Analysis of program similar to Abecedarian for children ages 1 to 3 shows reduction in achievement gap
- Michigan’s state preschool program associated with stronger graduation rates

Lessons Learned from Research

- Invest in quality
- Involve parents
- Start early
- Reach vulnerable children and families
- Bring to scale

Minnesota Early Childhood Education Funding



*FY2016: $28 million state aid, $22.1 million local levy

FY2017: $30.1 million state aid, $22.1 million local levy

Sources

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