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Why Money Matters for Children's Development

Vonnie C. McLoyd
Department of Psychology
University of Michigan



Money and Children's Development: Explaining the Links

- *Investment Perspective*
- *Family Stress Perspective*
- *Environmental Stress Perspective*



Investment Perspective

Family Income



Investment of Resources

- Books & Educational Materials at Home
- High-quality Child Care
- Safe Neighborhoods
- Parent's Time with Child



Child Development

- Learning & Cognitive functioning
- School Achievement



Evidence from Non-Experimental Longitudinal Research

Robust links exist between family income, quality of home environment, and cognitive functioning

- **Strong association between family income and preschoolers' cognitive functioning, *controlling for parent & family characteristics*** (e.g., Duncan et al., 1994)
- **Differences in the provision of cognitive stimulation in home (e.g., educational materials, reading) is a major mediator of this link** (e.g., Duncan et al., 1994; Smith et al., 1997; Votruba-Drzal, 2006)
- **Within-family *improvements* in family income are associated with *increases* in the quality of low-income children's home environments** (e.g., Garrett et al., 1994; Votruba-Drzal, 2006)



Evidence from Experimental Research

Experimental research points to causal effects of family income during early childhood on children's academic achievement

- Estimates based on welfare and antipoverty experiments in the US in the 1990s indicate that experimentally-induced boosts to family income when children were preschoolers raised academic achievement, although the mediating processes are unclear (Duncan et al., 2011)
- On average, a boost of \$4,000 per year for 2-3 years increased children's achievement by almost 1/5 of a standard deviation
- Cost-benefit analyses of one of the earnings supplement programs in the study showed that the benefits to participants and to taxpayers outweighed the costs of the program



Evidence from Quasi-Experimental Research

Studies that capitalize on the natural variation in policy implementation suggest causal effects of income on children's school achievement

- **Improvement in low-income children's school achievement and educational attainment coincides with an increase in the US Earned Income Tax Credit** (Chetty et al., 2011; Dahl & Lochner, 2012; Maxfield, 2013)
- **Likewise, in Canada, when family income increased due to an increase in the child tax credit, low-income children's math and vocabulary scores improved** (Milligan & Stabile, 2011)
- **This research estimates that a \$3,000 increment in annual family income produced roughly a 1/5 standard deviation increase in test scores**



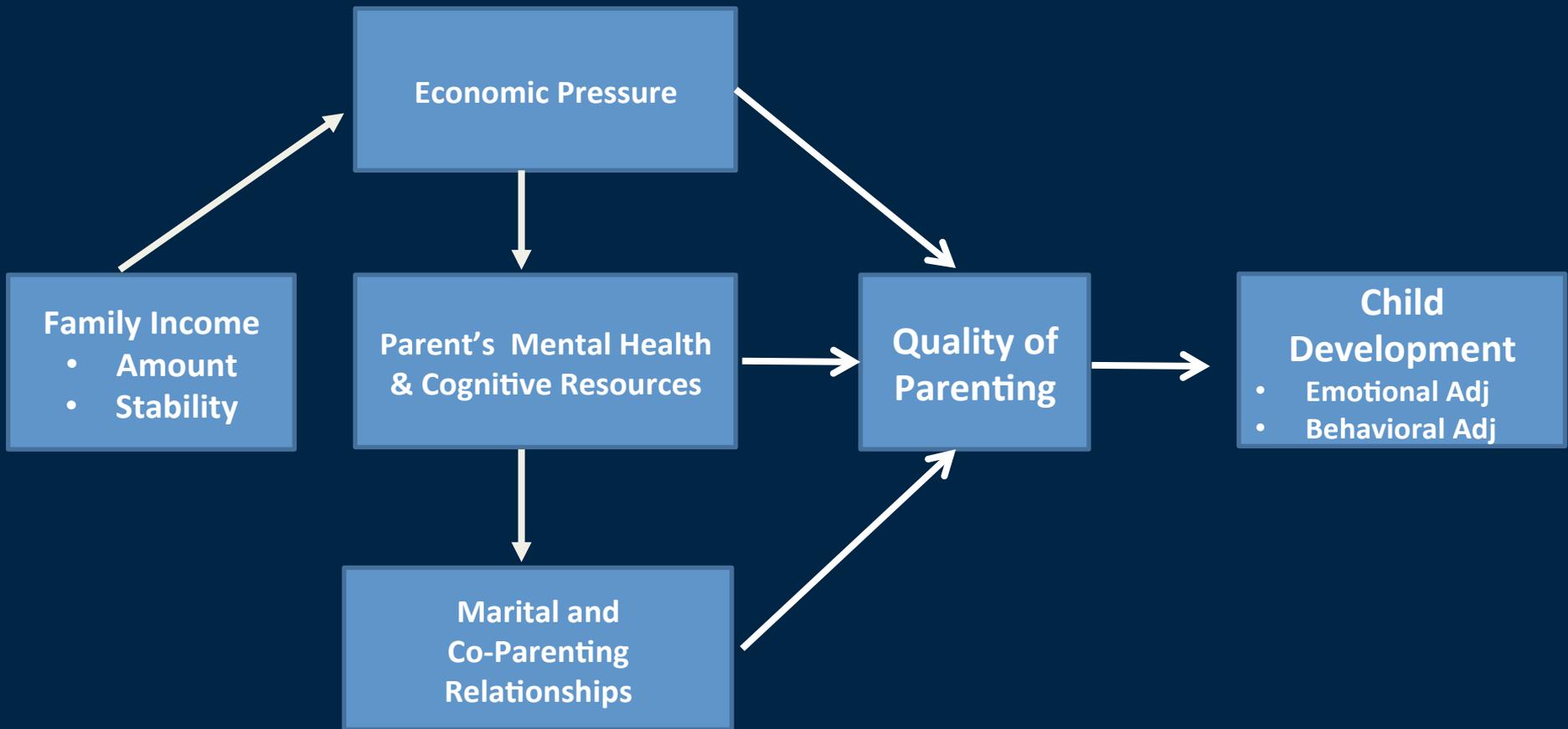
Evidence from Non-Experimental Longitudinal Research

Growing evidence that the timing of family economic conditions matters

- Family economic conditions experienced *before* the age of 5, compared to those experienced *after* the age of 5, are more strongly associated with children's completed schooling, academic outcomes, adult earnings, and work hours (Duncan et al., 1998, 2010; Votruba-Drzal, 2006)
- Stronger effects of income in early childhood are consistent with
 - growing evidence that the developing brain is more sensitive to environmental influences in the first years of life (Center on the Developing Child, 2016)
 - the notion that early skills provide a key foundation for later skill acquisition (Heckman, 2006)



Family Stress Perspective





Evidence from Non-Experimental and Experimental Research

There is stronger, more consistent support for direct links than mediated processes

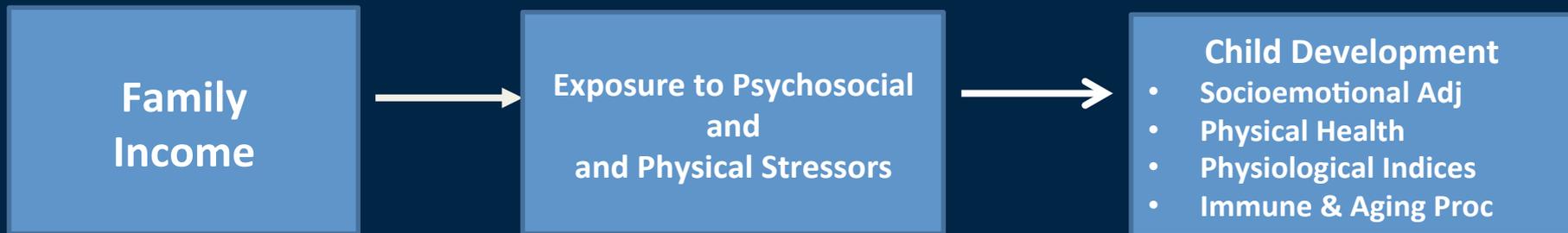
- **Amount of family income generally is more strongly related to children's cognitive functioning and academic achievement than their socioemotional development** (e.g., Conger et al., 2010; Duncan & Brooks-Gunn, 1997)
- **Abrupt decreases in family income are linked to greater psychological distress among parents, disruptions in family routines, decreases in cognitive stimulation in the home, increased school absences, and poorer academic performance among children** (Conger et al., 2010; Morrissey et al., 2014; Raver et al., 2015; Sandstrom & Huerta, 2013; Votruba-Drzal, 2003)



- **Some, but not all, experimental earnings supplement programs in US improved children's positive behavior and reduced behavior problems —consistent with evidence that increases in Canada's Child Tax Benefit reduced physical aggression in girls** (McLoyd et al., 2006; Milligan & Stabile, 2011; Morris et al., 2001)
- **No consistent evidence that parent well-being, parenting practices, or family relations mediated these effects** (McLoyd et al., 2006; Morris et al., 2001)



Environmental Stress Perspective





Evidence from Non-Experimental Research

Significant links exist between family income, stress exposure, and biological and psychosocial indicators

- **Stress processes linked to poverty include detrimental changes in the body's hormonal responses to prolonged stress and alterations in immune and aging processes** (Shonkoff et al., 2012)
- **Boys who grow up in highly disadvantaged environments (poverty, low maternal education, unstable family structure, harsh parenting) have shorter telomeres than boys who grow up in advantaged environments** (Mitchell et al., 2014)
- **Cumulative stressor exposure has been shown to mediate the link between poverty and children's psychosocial adjustment** (e.g., Evans & English, 2002)



Evidence from Quasi-Experimental Research

Studies that capitalize on the natural variation in policy implementation suggest causal effects of income on infant and child physical health

- In the US, improvement in birth outcomes (e.g., an increase in birth weights) coincided with increases in state EITCs (Strully et al., 2010)
- In Canada, an unconditional prenatal income supplement to very low-income pregnant women was associated with reductions in low birth weight and preterm births (Brownell et al., 2016)
- It is unclear whether additional income made a difference in these studies because it was used for more nutritious food, because it reduced the stress created by economic pressure, or because of other reasons
- Increases in Canada's child tax credit are associated with decreases in hunger and obesity, and increases in height among boys from low income families (Milligan & Stabile, 2011)



Summary

- **Experimental and quasi-experimental research points to causal effects of income on children’s academic achievement.**
- **Links between family income and children’s cognitive development and academic achievement are due in part to differences in the provision of cognitive stimulation in the home.**
- **Within-family improvements in income are associated with increases in the quality of low-income children’s home environments (e.g., books, educational toys), suggesting that low-income parents use “extra” money, in part, to improve the quality of the home learning environment.**
- **The timing of family economic conditions matters. Conditions during early childhood are more consequential for academic achievement, educational attainment, and employment-related outcomes than are conditions after this period.**



Summary

- **Abrupt decreases in family income are linked to declines in family, child, and parent well-being (e.g., disruption in family routines, greater psychological distress, poorer academic performance).**
- **Significant links exist between family income, stress exposure, and children's biological and psychosocial functioning.**
- **Quasi-experimental research suggests causal effects of income on important indicators of infant and child physical health (e.g., low birth weight, prematurity) that may set the stage for later-life progress. The extent to which these effects are due to a reduction in exposure to stressors is unclear.**



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