The Impact of Poverty Reduction on Child Health, Nutrition, and Sleep in the United States

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Sector(s): Health

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Sample: 1,000 mother-infant dyads

Target group: Children Mothers and pregnant women

Outcome of interest: Nutrition Health

Intervention type: Cash transfers

AEA RCT registration number: AEARCTR-0003262

Données: https://www.icpsr.umich.edu/web/ICPSR/studies/37871

Research Papers: Unconditional Cash Transfers and Maternal Assessments of Children's Health, Nut...

Partner organization(s): National Institutes of Health (NIH)

Children experiencing poverty experience higher rates of injury, chronic illness, poor sleep, and utilization of emergency health services compared to more affluent children. To understand the causal impact of poverty reduction on children's health, nutrition, sleep, and healthcare utilization, among other outcomes, researchers randomly assigned new mothers to receive an unconditional cash transfer of $333 (high-cash group) or $20 per month (low-cash group) in the Baby's First Years study. Children in the high-cash group had higher produce consumption at age two, but no impacts were found on health, sleep, or healthcare utilization at age three.

Policy issue

Nutritious food, safe and stable housing, and preventive healthcare are key for healthy childhood development; however, households living in poverty face many barriers in accessing these resources. As a result, children experiencing poverty are more

likely to experience injury, chronic illness, poor sleep, and more frequent use of emergency health services.

Researchers hypothesize two pathways by which unconditional cash transfers may improve childhood health outcomes. First, mothers may use the money to invest in high-quality resources such as nutritious foods, preventative healthcare, a separate sleep space, and safe housing. Second, the money may reduce financial strain and thereby reduce parental stress and mental health symptoms, which may in turn improve family interactions, bedtime routines, and child sleep quality.

While previous research suggests that small increases in income may improve health for children experiencing poverty,[1] the causal impact of poverty reduction on child development outcomes, and the pathways of this impact, remain unclear.

Context of the evaluation

A team of researchers across six universities, with support from over two dozen partners,[2], initiated the Baby's First Years study in 2018 to evaluate the causal impact of poverty reduction on children. Specifically, they are measuring the effect of regular, unconditional cash transfers, concentrating on a range of early childhood outcomes including brain activity, parental stress, expenditures, health, sleep, and nutrition. The research team recruited 1,000 low-income mothers, the majority of whom are Black or Hispanic, in postpartum wards across four diverse metropolitan areas: New York, New Orleans, Omaha, and the Twin Cities.

A baby boy is fed fruits.

Photo credit: Best smile studio, shutterstock.com

Details of the intervention

Researchers randomly assigned 1,000 mothers to a “high-cash” group or a “low-cash” group. The high-cash group was offered $333 per month and the low-cash group was offered $20 per month for the first 76 months of their child’s life. The larger payment amounted to a 20 percent boost in participants’ annual income on average.

In this paper, researchers analyzed data on child health, nutrition, sleep, and healthcare utilization as reported by mothers in surveys at years one, two, and three. The outcomes were measured as follows:

Health: Mother-reported ratings of their child’s health and whether or not their child was diagnosed with a health condition or disability since birth.

Nutrition: Mother-reported average of their child’s fruit and vegetable consumption, and sweets and sweetened beverage consumption. Child nutrition data was only reported at year two.

Sleep: Mother-reported frequency of their child’s sleep-related difficulties in the past week, using the Patient-Reported Outcomes Measurement Information System (PROMIS) Sleep Disturbance–Short Form.

Healthcare utilization: Mother-reported estimates of the number of times they took their child to a doctor due to illness and injury, and the number of times they brought their child to an emergency department or urgent care in the past year.

Results and policy lessons

Children in the high-cash group had higher produce consumption at age two, but no statistically significant impacts were found on other nutrition outcomes, health, sleep, or healthcare utilization at age three.

The high cash transfer increased child consumption of produce at age two by .17 standard deviations, or 7.6 percent more servings of fresh produce per day. This effect was primarily driven by fruit consumption, where children in the high-cash group consumed 11.2 percent more servings of fresh fruit per day than the low-cash gift group. Researchers posit that the cash gift allowed mothers to take the financial risk of purchasing fresh produce, which they may have otherwise been hesitant to buy due to fears their children would reject it.

Researchers did not find a statistically significant impact of the high cash transfer on other nutrition outcomes, health, sleep, or healthcare utilization at ages one, two, or three.

While the intervention did increase the income of families by nearly 20 percent, most of the families were still living in poverty, so it is possible that it was not a sufficient amount of money to surmount barriers to accessing preventative healthcare or improving sleep (e.g., maternal stress or housing quality). It is also possible that impacts on health will not emerge until later on in life, as many diseases associated with childhood poverty, such as hypertension, type 2 diabetes, and heart disease, tend to emerge in adolescence or adulthood. The researchers will continue to follow the families in order to understand whether investments in early childhood improve health and development later in life.

Sperber, Jessica F., Lisa A. Gennetian, Emma R. Hart, Alicia Kunin-Batson, Katherine Magnuson, Greg J. Duncan, Hirokazu Yoshikawa, Nathan A. Fox, Sarah Halpern-Meekin, and Kimberly G. Noble. "Unconditional Cash Transfers and Maternal Assessments of Children's Health, Nutrition, and Sleep: A Randomized Clinical Trial." JAMA network open 6, no. 9 (2023): e2335237-e2335237.

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1. Hoynes, Hilary W., Douglas L. Miller, and David Simon. 2013. “The EITC: Linking Income to Real Health Outcomes.” Policy Brief, Center for Poverty Research 1 (2). https://doi.org/10.15141/S5SG6Q.

2. The Baby’s First Year project is made possible through support from the Eunice Kennedy Shriver National Institute of Child Health and Human Development of the National Institutes of Health, the US Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation; Andrew and Julie Klingenstein Family Fund;

Annie E. Casey Foundation; Arnold Ventures; Arrow Impact; Blue Cross Blue Shield of Louisiana Foundation; Bezos Family Foundation, Bill and Melinda Gates Foundation; Bill Hammack and Janice Parmelee, Brady Education Fund; Chan Zuckerberg Initiative (Silicon Valley Community Foundation); Charles and Lynn Schusterman Family Philanthropies; Child Welfare Fund; Esther A. and Joseph Klingenstein Fund; Ford Foundation; Greater New Orleans Foundation; Heising-Simons Foundation; Holland Foundation; Jacobs Foundation; JPB Foundation; J-PAL North America; Lozier Foundation; New York City Mayor's Office for Economic Opportunity; Perigee Fund; Robert Wood Johnson Foundation; Robin Hood; Sherwood Foundation; Valhalla Foundation; Weitz Family Foundation; W.K. Kellogg Foundation; and 3 anonymous donors.