

The role of preschool in reducing short- and long- term inequality

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Motivation

Early emergence and persistence of health and educational gaps by SES,
even:

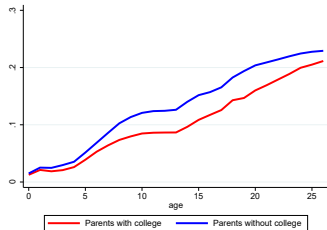
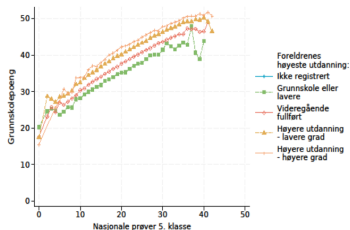
- in countries with universal health insurances;
- in countries with free primary and secondary education;
- in front of increasing health care and education expenses.

Motivation

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What is the role of preschool to prevent or reduce them?



Source: 5th and 10th grades GPA by parental education in Norway (left). Proportion of individuals assessed with mental health diagnoses/symptoms by the primary health care services between 2006 and 2020 in Norway (right).

Types of interventions and evidence

Motivation: Benefits of early interventions

	Targeted	Universal
Single-component/ Specific services	- Perry Preschool Project (small-scale): long-term health, crime, labor market benefits	-Infant health care centres & home visiting: long-term health, educational benefits -Childcare: educational gains, no health impacts
Multi-component/ Integrated services	-Abecedarian Project: long-term health, crime, labor market benefits -Head-Start (large-scale): long-term health benefits; crime reduction; improved labor market outcomes	Sure Start (UK): short- and medium-term health and education benefits

Types of early childhood programs 1/4

Long-lasting benefits of small-scale "model" targeted early interventions (RCTs).

- **Abecedarian:** 111 disadvantaged children born 1972-1977, in Chapel Hill, NC (57 treated, 54 control)
 - Two-stages treatment: 0 to 5 + 6 to 8 y.o.
 - First stage: cognitive and social stimulation & caregiving and supervised play throughout 8-hour day → curriculum-based
 - (Second stage focused on improving math and reading skills through "homeschool resources").
 - Substantial effects on health and (health-related) outcomes and crime for males; in education, employment, and minor crimes among females
- **Perry program** targeted disadvantaged, low IQ African American children ages 3-4 in 1960s (Ypsilanti, Michigan): 123 participants (88 treated, 65 control)
 - Active participatory learning, and children engage with objects, people, events, and ideas (2.5h, 5 days per week)
 - By age 40 there were significant improvements on education, employment, earnings, marriage, health, and participation in healthy behaviors, and reduced participation in crime
- Campbell et al. (2014); Conti et al. (2016), Heckman et al. (2010), ...

Types of early childhood programs 2/4

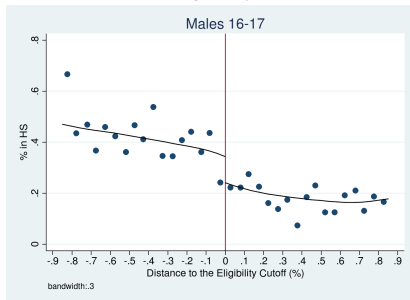
Contemporaneous large-scale targeted programs

- **Head Start** launched in the 1960 & serves around 800,00 poor children in US
- Short term increased health insurance coverage (DHHS, 2010, 2012).
 - fade-out could be due to substitution between different types of public services (Kline and Walters, 2016) and/or heterogeneity of HS centers (Walters, 2015).
- Medium-term benefits for mortality (Ludwig and Miller, 2007); obesity (Carneiro and Ginja, 2014; Frisvold and Lumeng, 2011); and depression (Carneiro and Ginja, 2014).
- Long-term benefits for adult earnings, education, health insurance coverage, and risky behaviors such as smoking and crime (Carneiro and Ginja, 2014, Anders, Barr and Smith, 2022; Bailey, Sun and Timpe, 2020; Thompson, 2018)
- Children of participating parents: increased educational attainment, reduced teen pregnancy, and reduced criminal engagement (Barr and Gibbs, 2022).

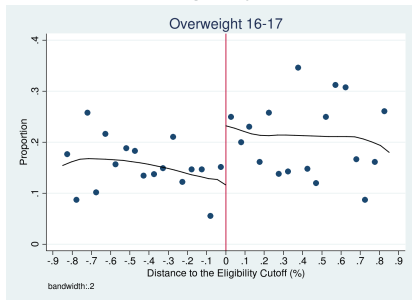
Fuzzy RD: Carneiro and Ginja (AEJ Econ. Pol., 2014)

- Eligibility to Head Start (HS) depends on income
- If **family income is** $<$ **income cutoff** (varies annually and by family size), the family is eligible to participate.

Discontinuity in Program Participation
at the eligibility cutoff



Discontinuity in Outcome
at the eligibility cutoff



Types of early childhood programs 3/4

Early 20th century universal programs: Scandinavian infant health care centres & home visiting implemented in the 1930s

- **Sweden:** Provision of information and support to mothers: nutrition and sanitation + monitoring infant care through home visits and clinics → 1.56p.p. decline in the risk of infant death (24% effect) and a 2.56p.p. point decline in the risk of dying by age 75 (7.0%; Bhalotra et al., 2017)
- **Norway:** Increasing access to mother and child health care centers in the first year of life → increased years of schooling by 0.15 years and earnings by 2% (Bütikofer et al., 2019).
- **Denmark:** higher survival rates at 45–64, fewer hospitalizations, and reduction in diagnoses of cardiovascular disease (Hjort et al., 2017)

Types of early childhood programs 3/4

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- **Better nutrition within the first year of life is a likely mechanism: reduction in predisposition for serious adult diseases**
- **Administrative data:** Taxes, educational records, data on the use of health services (visits to hospitals, health centers), criminal records, Social Security records

Types of early childhood programs 3/4

Contemporaneous universal programs - **mostly childcare**:

- Canada: Quebec's \$5 per day childcare shift children from no care (2/3) and informal arrangements (1/3); Baker et al., 2008
 - Increased maternal labor force participation
 - But, children are worse off in a variety of behavioral and health dimensions, ranging from aggression to motor-social skills to illness → worse parental health and lower-quality parental relationships.
- Similar effects found in Israel (Schlosser, 2005), Argentina (Berlinski and Galiani, 2007)
- Publicly subsidized preschool or child care programs in US: reduced likelihood of high-school dropout for whites. But no effect on other outcomes (employment, college attendance, earnings) or for blacks (Cascio, 2009)

Types of early childhood programs 4/4

Contemporaneous universal programs - **mostly childcare:**

- **Norway:** Development of public universal kindergarten since 1975 for children aged 3–6 years in Norway (Havnes and Mogstad, 2011a, 2011b, Breivik, Del Bono and Riise, 2019)
- Positive effects on children's educational attainment, labor market participation and reduced welfare dependency at early 30s.
- Girls and children with low-educated mothers benefit the most from child care
- Increased use of pregnancy-related healthcare services and sickness absence by women at ages 30-40
- **No net increase in maternal labor supply**
- Israel, Argentina, Canada vs. Nordic Countries + kindergarten in US
 - Impacts on maternal employment and rise in child care utilization → crowding out of informal care arrangements by the new subsidized child care slots.

Types of early childhood programs 4/4

Contemporaneous universal programs - **mostly childcare + integrated services**:

- Sure Start (UK) is a **universal, scaled-up, 'light-touch'** version of model programmes:
 - **holistic intervention** for families with children under 5
 - access to **variety of services** through network of local centres
- Sure Start was modelled after Head Start but:
 - It was **rolled out universally** → potential heterogeneous impacts
 - It was **implemented in England** → free universal health care + growing childcare support

Cattan et al. exploit the 10-year rollout of the program to estimate impacts of increased access to SS on children's hospitalizations from infancy to adolescence

- We find short-term increases (for infections) and long-term decline in hospitalisations (for external causes and mental health), concentrated in boys & in poor neighborhoods

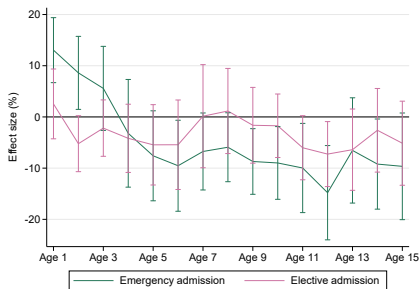
Services offered by Sure Start Centres

Figure 1: Main Sure Start services

Health services	Antenatal classes, breastfeeding support, smoking cessation support, postnatal depression services, weaning and child nutrition classes, baby massage, child exercise classes, drop-in baby clinics
Parenting support	Evidence-based programmes (Triple P, Incredible Years), Play and learning activities (drop-in stay-and-play sessions, toy libraries)
Support for parents	Assistance with benefit claims, skills development and employment support
Childcare (only SSCCs)	Requirements slightly different across the three phases

Impacts on hospitalisations and education

Figure 2: Sure Start's effect on probability of any hospitalisation, by admission route



Notes: Figure shows coefficients from separate regressions for each outcome age. Coefficients are re-scaled by the baseline (1996) mean for each age. Vertical bars show 90% CIs.

⇒ Sure Start is affecting the incidence of illness or injury, not just families' propensity to seek health care.

⇒ It improved performance at GCSE

Discussion

Discussion

- What about Portugal?
 - The legal guarantee of a place in ECEC is not guaranteed for children under three years of age, and the demand for places exceeds the supply.
 - About 50% of 0-2 y.o. are enrolled in ECEC facilities
 - **Portugal:** In 2021/2022, 81.9%, 96%, 99.8% of 3/4/5 years old in preschool
 - **Norway:** In 2022, 90% of children in the age group 1–2 years went to nursery
- What is the choice available for under 3? And for families? (reminder: female labor participation is similar in Portugal and Scandinavian countries, about 75%)
- Formal child care in Norway (& Nordic countries) is characterized by relatively high expenditure levels per child
 - Average yearly expenditure for a slot in formal child care was approximately USD 6,600 (higher than the expenditure for the Head Start)
 - Extensive requirements to qualifications of child care staff and physical environment, relatively low number of children per staff.

Discussion

- **Challenge:** limited research on how educational interventions affect children in the long run. Difficult to compare different interventions based on different short term outcomes.
- Even less for a setting similar to Portugal
- Interaction with other policies: parental leave.

Thank you!