

# Promising interventions to decrease social inequalities in child development

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# Motivation

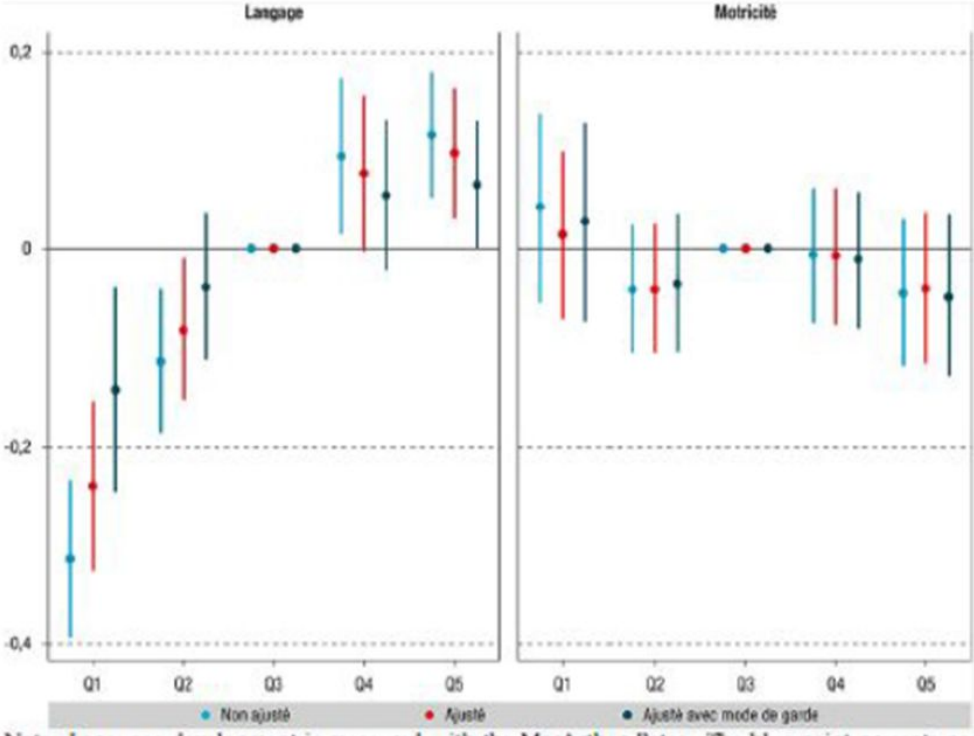
- Early childhood is a critical period for development
- The brain grows faster than ever and is highly responsive to environmental influences (Shonkoff & Phillips, 2000; Knudsen et al., 2006)
- During the first years, children grow cognitive, socio-emotional, and motor skills that will pave the ground for the construction of future skills => **Skills beget skills** (Heckman, 2008)
- **Language acquisition** is important since it predicts future level of language skills (Friend et al., 2012; Rowe, 2008; Rescorla, 2005) and other academic skills such as reading and writing (Schoon et al., 2010; Tomblin et al., 2003)

# The quality of home environment

- Child development is shaped by interactions with their environment
- Parents play a fundamental role in the language development of their children (Jeynes, 2005; Kautz et al., 2014)
- Gaps in development between low-SES and high-SES children emerge really early in life and persist over time
  - Hart & Risley (1995): in the US, **30-million words gap** between low-SES children and high-SES children at 4 yo

# Early language inequalities (France)

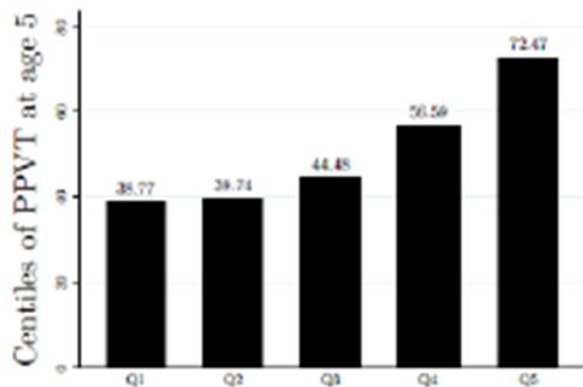
FIGURE 1  
SOCIO-ECONOMIC INEQUALITIES IN LANGUAGE AND MOTOR DEVELOPMENT IN FRANCE



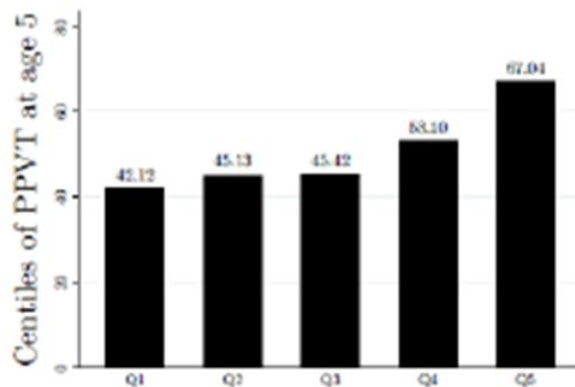
# And around the world

## LANGUAGE DEVELOPMENT AT AGE 5 BY FAMILY WEALTH QUINTILE IN THREE DEVELOPING COUNTRIES

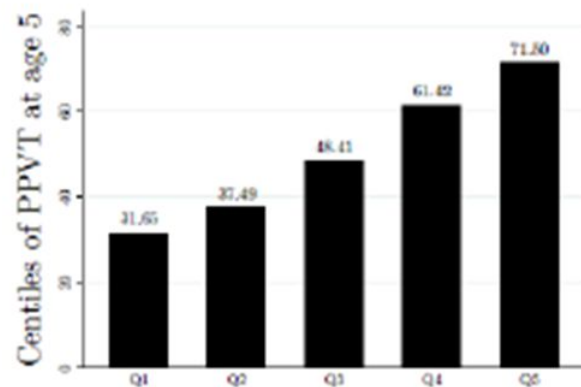
(a) Ethiopia



(b) India



(c) Peru

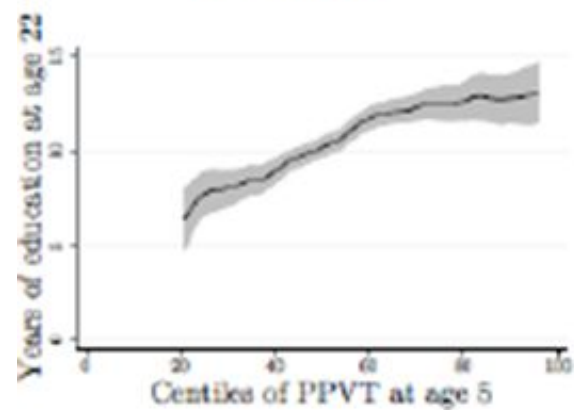


# Persistence of the inequalities

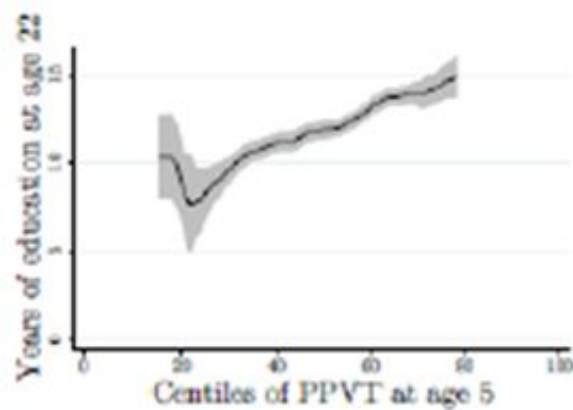
- These large inequalities do **persist over time** and impact the schooling, professional, and socio-emotional **trajectories** (Heckman, 2008)
- Many examples showing that individuals from poor socioeconomic background have complicated schooling, professional, health or social trajectories (e.g PISA)

Panel C: Relationship between PPVT rank at age 5 and years of education at age 22

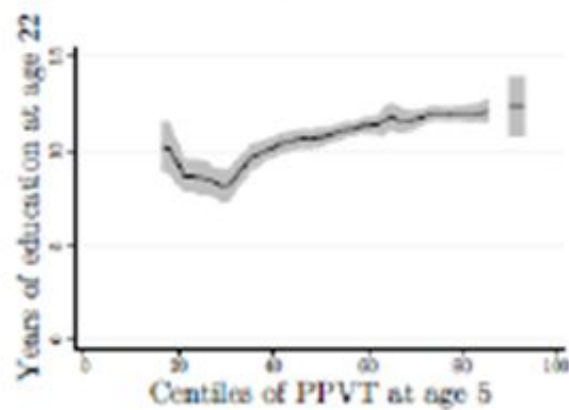
(g) Ethiopia



(h) India



(i) Peru



# SES status and home environment

Low-SES parents tend to **do less and/or with lower quality**

- **Less books or games** at home (intensive and extensive margin)
- They **read less** to their children (Myrberg & Rosén, 2009; Marulis & Neuman, 2010)
- They have **lower-quality conversations** with their children (Hart & Risley, 1995; Hoff, 2003; Gilkerson et al., 2007) => e.g they use more (negative) injunctions



# SES status and home environment

- We know that basic activities such as: conversations, reading books, simple games, lullabies can have great impact on children's development (Barone, 2022)
- Actually; one important difference between low- and high-SES parents is about **information**
- Low-SES parents have lower level of information and so invest less on practices that are conducive to child development

# What to do then?

We usually have two types of policies to help those that need more

- **Institutional policies:** improving the educational quality of out-of-school environments (nurseries, schools)
  - Carolina Abecedarian, Head Start
- **Familial policies:** try to improve the environment of the children at home
  - Home visits (nurse coming at home etc.)
  - Pediatric visits (Video Interaction Project)
  - **Text messaging** interventions

# Text-Message Intervention

- Text messages = potential for **effective and low-cost** interventions to improve child development
- **Non-prescriptive information** and **encouragement** of parents to adopt practices favoring child's development through small steps that are easy to achieve

# Text-Message Intervention: what do we know?

- Too little or too much information: **content and frequency matter**
  - 1 text/week < 3 texts/week > 5 texts/week (Cortes et al., 2018)
  - Parents feel overburdened with too many or too complex text messages and are more likely to drop out (Fricke et al., 2018)
- **Timing matters** (Cortes et al., 2018)
  - Week-end seems more efficient for low-educated parents and low-dvpt children
  - Weekdays seems more efficient for high-educated and high-dvpt children
- **Personalization matters** (Doss et al., 2019)
  - Child-specific information + increasing sense of familiarity
  - Personalized and differentiated text messages make parents more likely to adopt practices and is beneficial for child development

# Text-Message Intervention: what do we know?

- Evidence from the US: York et al. (2019)
  - Ready4K program: 8-month long / low-SES parents / 4-6 yo children
  - Better parental practices (home literacy activities)
  - Children have higher literacy skills

⇒ Great potential

⇒ What about for younger children (0-3 yo)?

# Evaluating a text-message intervention in France

- Evaluation of a French NGO's specialized in the development of parenting programs aimed at promoting language development of 0-3 yo children
- **Program:**
  - 394 low-SES parents w/ 12 to 34 mo children and enrolled in a nursery (70)
  - 3 text-messages/week (shared book reading, singing, games, with videos and photos to show examples)
  - 8-month long
- **Evaluation ⇒ RCT:** half received the intervention / half did not
  - What are the effects of parental practices (StimQ)
  - What are the effects on child development (Brunet-Lezine, WPPSI)

# What we found

- **Implementation difficulties**
  - Low take-up of the parents: they seem to lose interest after a few weeks
- **Parents have better reading practices (0.20 SD)**
  - Especially for low-educated parents, poor parents and parents with younger children
  - Strong effect considering the intensity & cost of the intervention
- **But no detectable effects on child development**
  - Low power ? ; potentially lower-intensity effects that we could not detect

# Conclusion

- Potential for low-cost and efficient interventions directed to parents in order to improve child development and reduce inequalities overall
- But it calls for an adapted implementation to adapt to all parental barriers (time, cognitive overload, etc.) to be truly efficient
- Need for future rigorous evaluations to determine the effects of such programs in different contexts + what mechanisms are more likely to reach efficiency