

Can Cash and Behavioral Change Programs Improve Child Development?



**Experimental evidence from
Nicaragua and Niger**

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(on sabbatical from World Bank)

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Motivation

- Equity and efficiency rationale for investments in early childhood developments
- Nutrition-specific interventions are the most common (Lancet, 2008)
 - But it's not only about nutrition (Grantham-McGregor et al., 1991; Gertler et al., 2014)
- Mixed evidence on pre-school/community-based interventions
 - E.g. Martinez et al., 2017, Bouguen et al., 2018; Blimpo et al., 2019
 - Take-up can be lower among the poor. Typically costly. Slow to scale up
- Growing interest in parenting/behavioral change interventions
 - Encouraging short-term results (Attanasio et al., 2015; Macours et al., forthcoming)
 - Pending questions: Can it be effective in low-income settings? At scale? Can impacts be sustained?

Complementarities between cash transfers and behavioral change parenting interventions?

- Promising potential complementarities between social protection and parenting interventions (Engle et al., 2011; Alderman, 2011)
 - Rapid expansion of safety nets, in particular cash transfers
 - Cash transfers target poor households, with more at-risk children
 - Cash transfers can relax budget constraints
- A model combining cash transfers and behavioral change parenting training/accompanying measures is spreading in Africa

Cash transfers and Early Childhood Development

- Cash transfers have multiple objectives (Fiszbein & Schady, 2009)
- Cash transfer impacts on human capital outcomes
 - Impacts on utilization of health and education services (Fiszbein and Schady, 2009)
 - Effects on anthropometrics less clear
 - Emerging links to ECD (e.g. Macours et al., 2012)
 - Open questions on how to optimize program design or identify pathways to affect early childhood development
 - Design parameters: conditions (Lopez Boo and Creamer, 2019), duration of exposure (Sanchez et al., forthcoming), soft conditions/accompanying measures,...
 - Questions particularly important for large-scale programs in low-income countries

Cash Transfers and ECD in Nicaragua (Macours et al., 2012)

- Large signs of delays in ECD among poor rural children in Nicaragua
- RCT of conditional cash transfer program
 - Small but significant effects on child development after only 9 months
 - Impacts are sustained 2 years after the end of the program (no fade-out)
 - Changes in child development are unlikely to be due to cash alone
 - Transfer income appears to have been used differently from other sources of income: suggests there were behavioral changes
 - *(Follow-up 10 years later is currently ongoing)*

Is it cash or behavioral change?

- In Nicaragua: test parenting intervention only
- Niger: disentangle effects of cash transfers and behavioral change promotion

Experimental evidence from an early childhood parenting intervention in Nicaragua

Karen Macours
Patrick Premand
Norbert Schady
Renos Vakis



Parenting intervention

- Designed and implemented by a think-tank specialized in education and early childhood development (CIASES)
- Activities:
 - Bi-weekly home visits by trained educators
 - 2-2.5 hour each visit
 - Focus on parents and children: showing practices by example
 - Information workshops for parents (5)
 - Age-specific didactic kit (toys) for each family, + basic material on parenting practices
- Children 0 – 6 years old (from 1375 households)
- Educators: Locally contracted, paid ~ salary of primary school teacher (~ 100 US\$ per month)

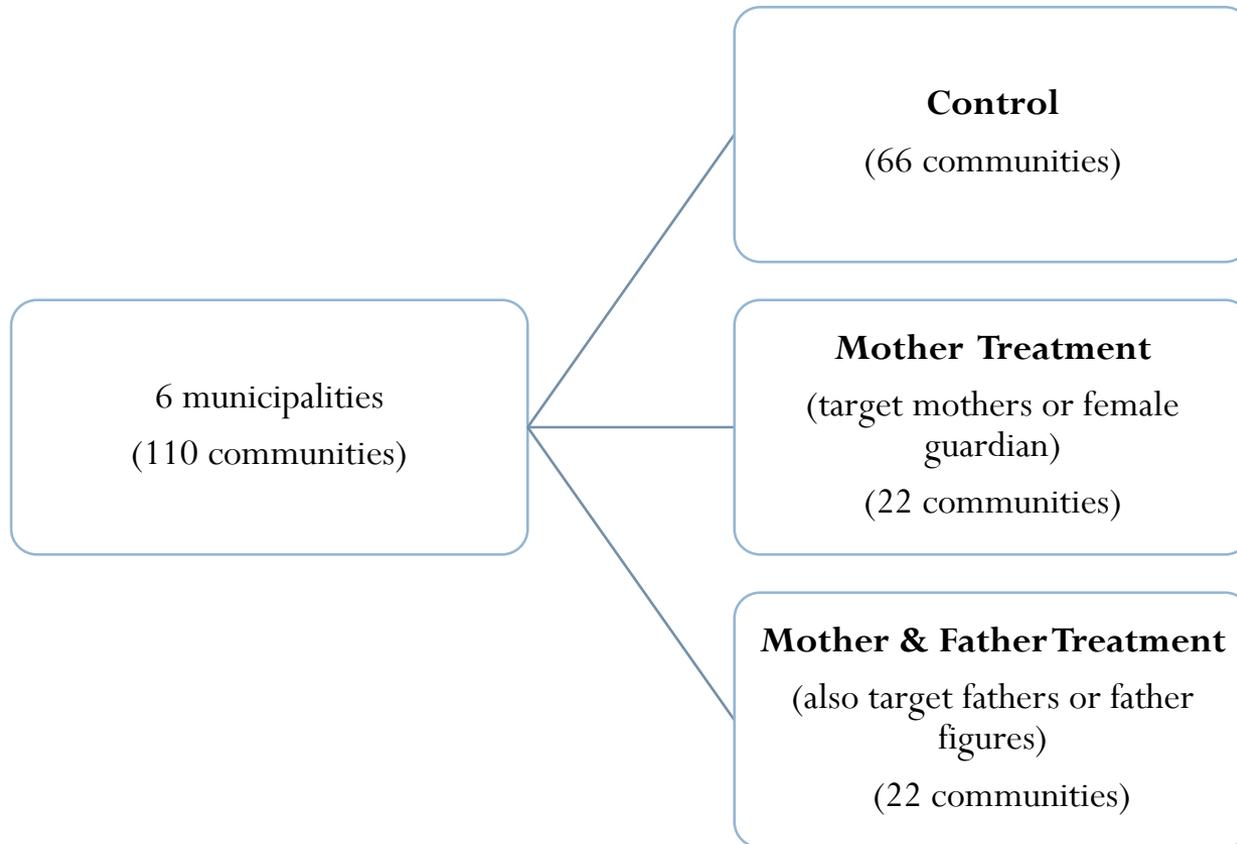
Content of parenting intervention

- Importance of stimulation and early childhood for child's development
- Role of language, reading, story telling
- Role of games
- Health and nutrition
- Affection and discipline
- Use of local resources (material, environment) for playing, stimulation, toys

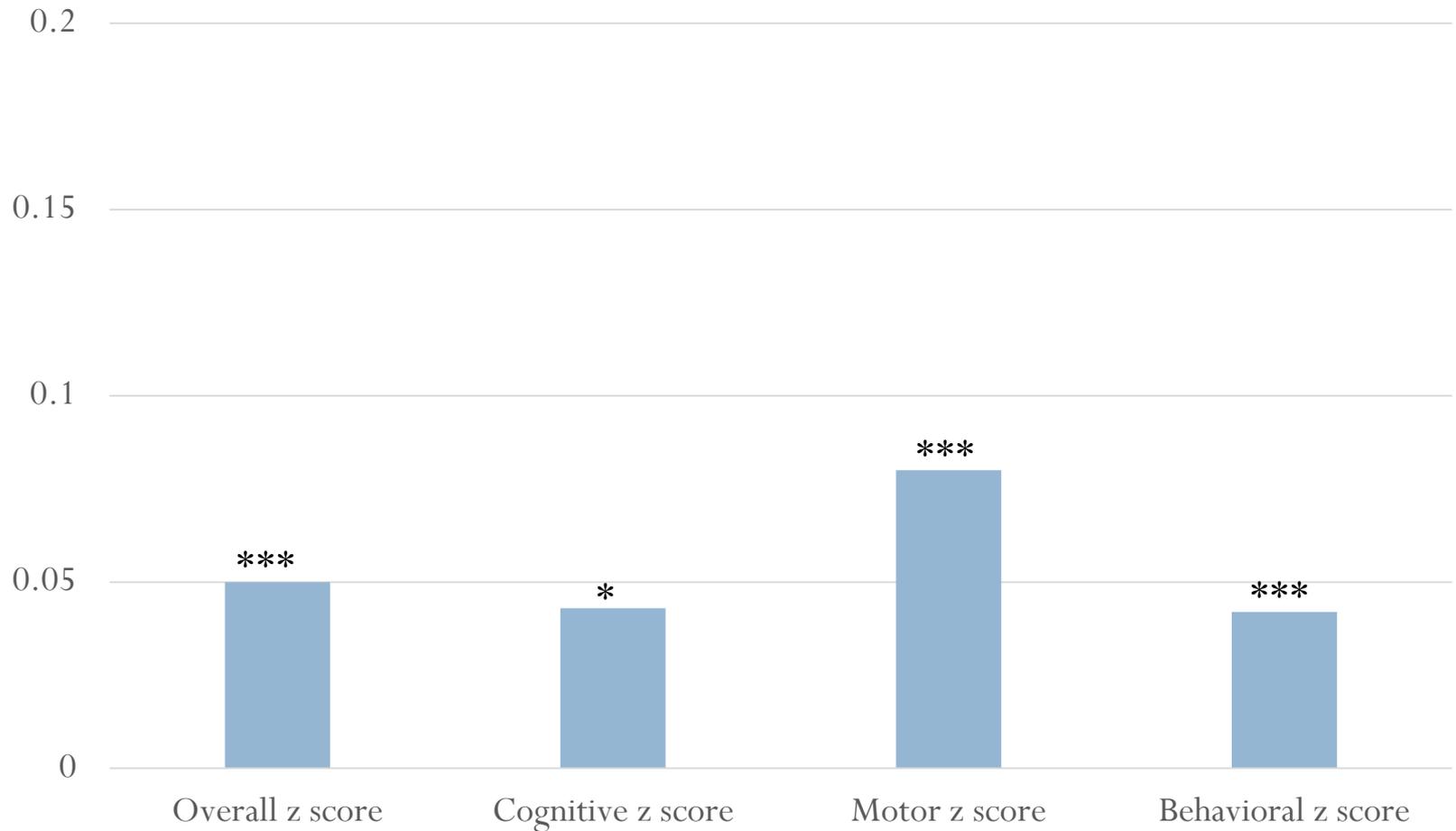
How (much) to target fathers?

- Contextual factors might imply limited impacts:
 - Small children are most of the time in the care of mothers
 - Cultural norm: child rearing is responsibility of mothers; fathers not involved much
 - Fathers often not at home, more difficult to target for visits
- But potential important gains
 - Fathers often manage household resources hence relevant for investment decisions
 - Presence/participation of fathers potentially important for ECD
 - Initial fathers' involvement is very low, hence high potential impact?

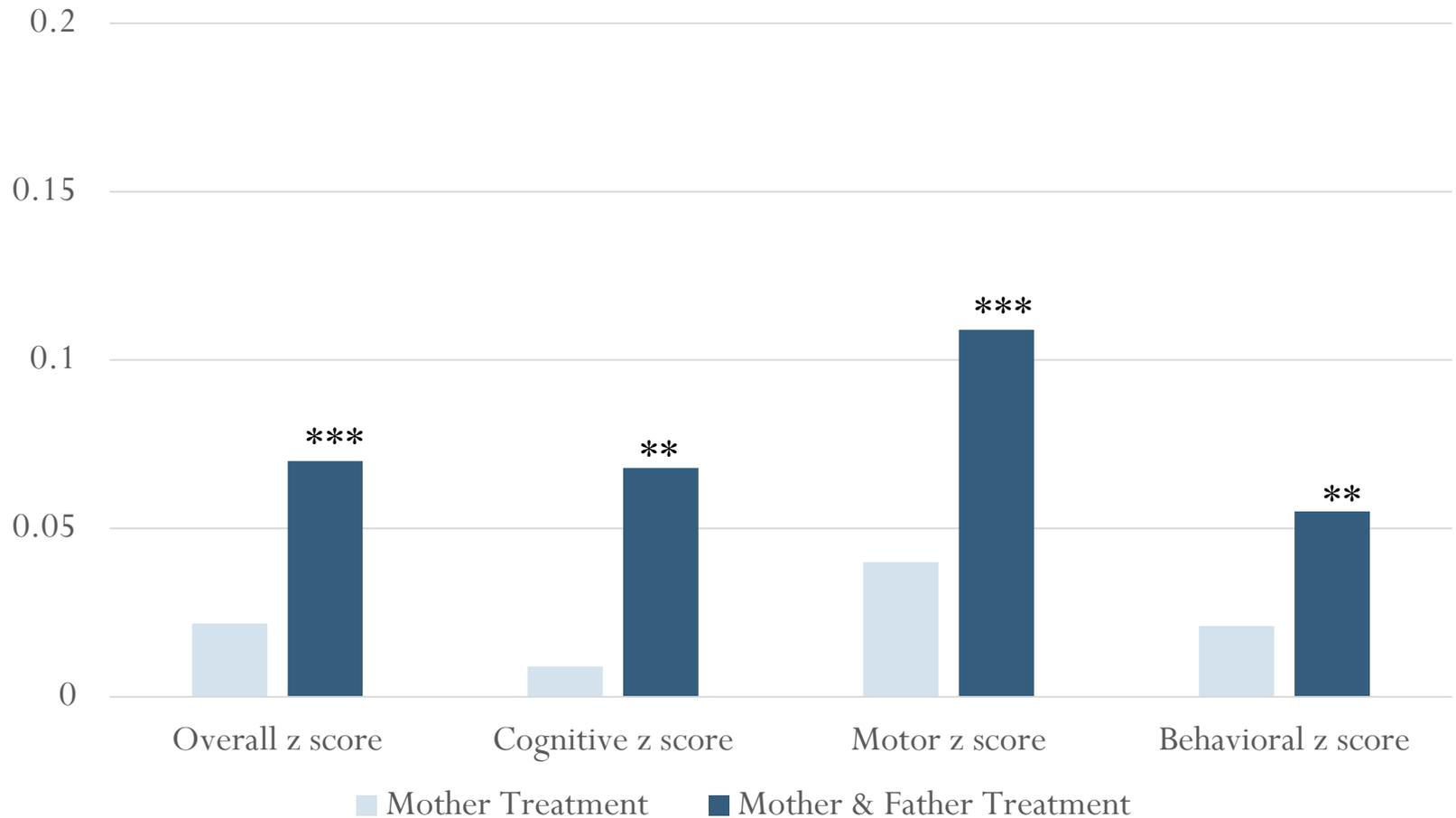
Experimental design



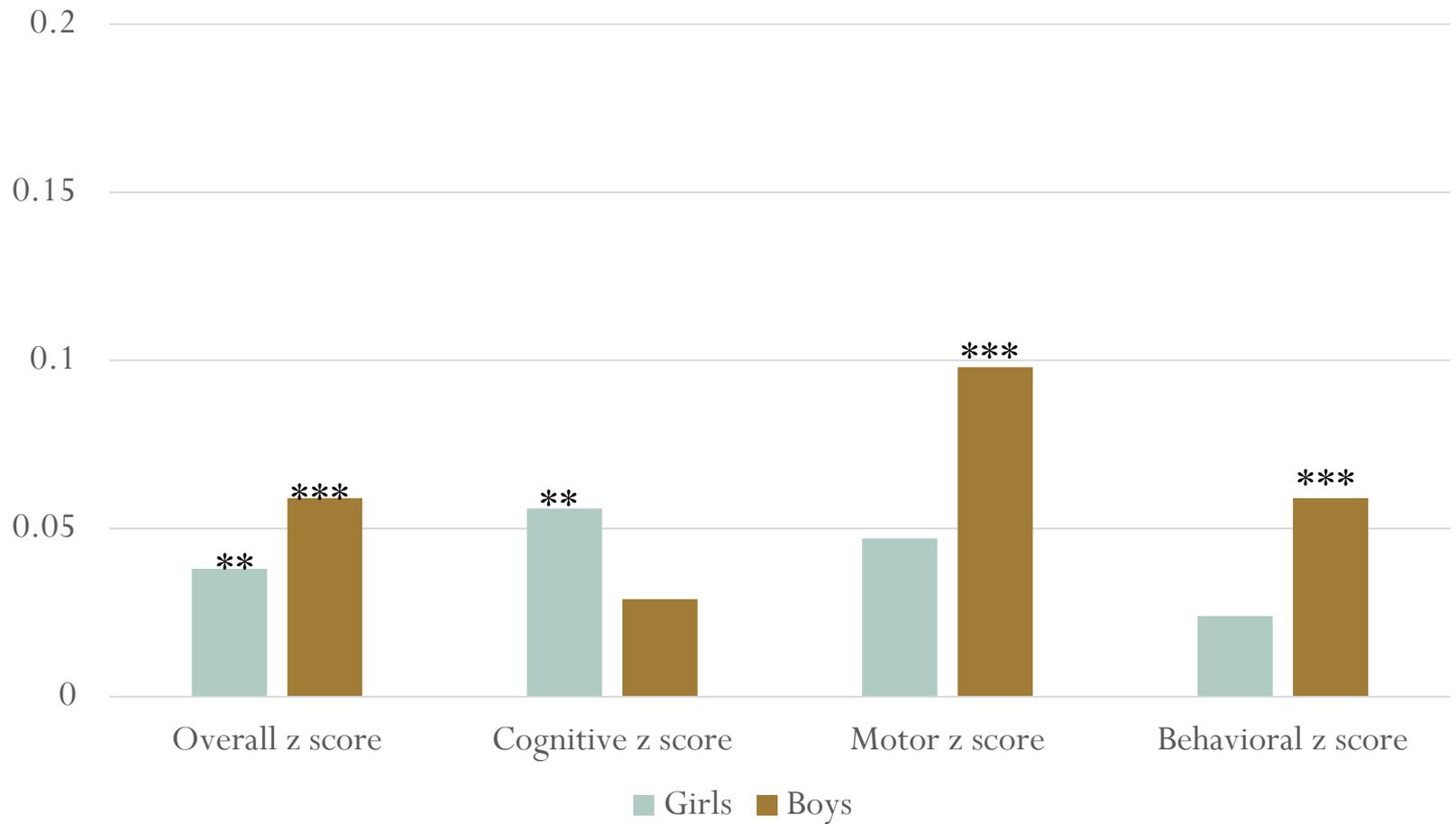
Significant (but small) overall impacts on cognitive development



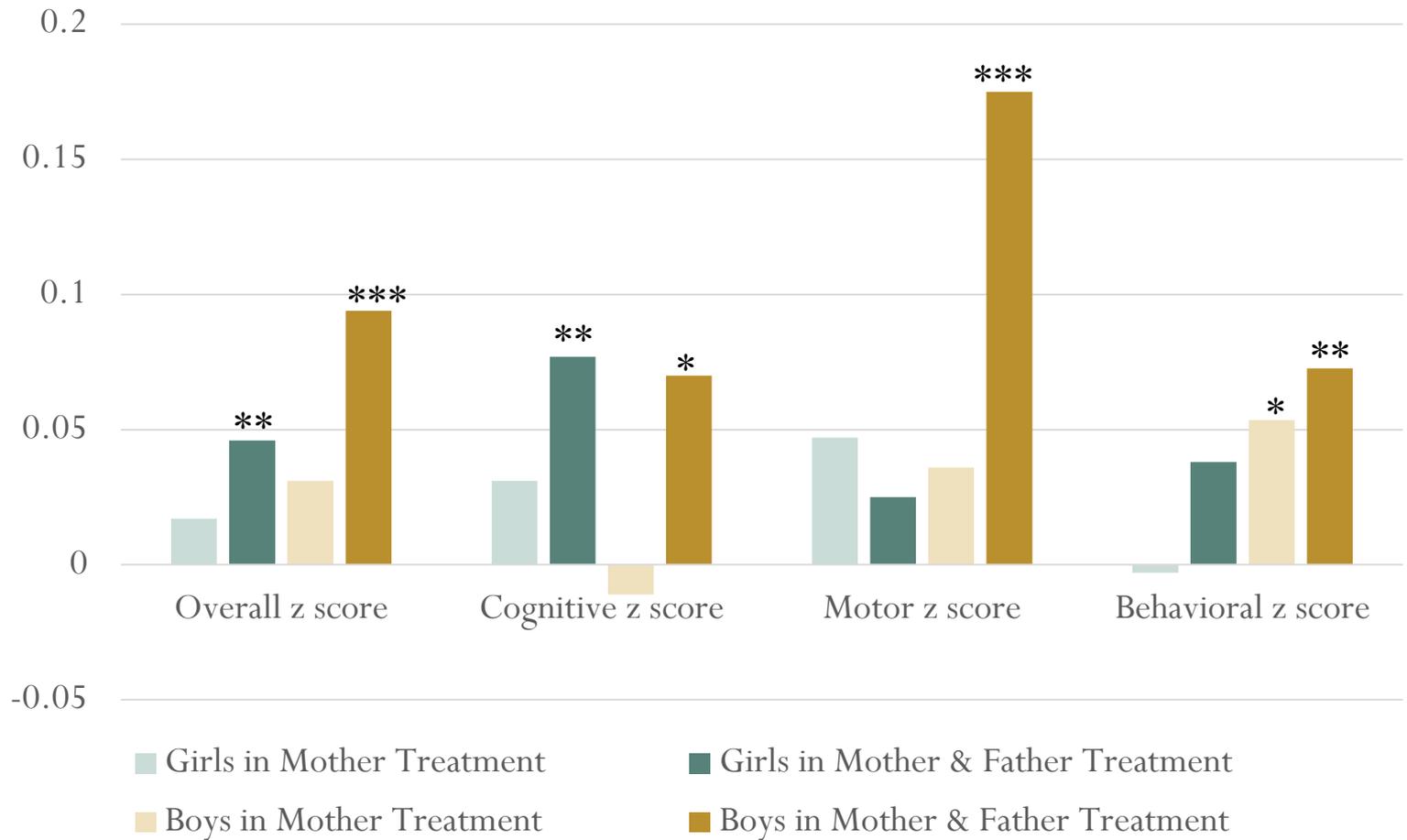
Impacts tend to be larger when targeting mothers and fathers



Some impacts larger for boys than girls



Impacts largest for boys in modality targeting mothers and fathers



Summary

- Small but significant improvements in ECD indicators from low intensity home-visiting parenting intervention
- Potential for external intervention to changes in parental practices and attitudes
- Targeting fathers can have large pay-offs, in particular for boys
- Low-cost, scalable model, including in developing countries

Cash Transfers, Behavioral Change Promotion, and Early Childhood Development

Large scale experimental evidence from a low- income setting

Patrick Premand (with O. Barry and M. Smitz)



Study context in Niger

- High poverty, exposure to shocks and poor human development outcomes
 - Niger ranked last in 2018 UNDP human development indicators
 - Stunting rate: 43%
 - Highest fertility rate in the world (7.6 children per woman)
 - 1 out of 5 Nigerien is a child aged 0-4
- National Safety Nets Project set-up in 2011 by the Office of the Prime Minister
 - Covers all regions in Niger
 - Has reached ~1 million individuals to date

Cash Transfer Component

- Cash transfer program aims to support chronic poor and vulnerable households by providing regular income transfers and encourage investments in human capital.
- Monthly transfers of \$20 (10.000 FCFA) per month for 24 months
 - Equivalent to 15% of poverty line
- Geographical targeting to select poorest communes, and proxy-means test to identify chronic poor households in selected villages
- Transfers are provided directly to women
 - First wife in polygamous households



Behavioral change component (BCC)

- Objective to foster behavioral changes among parents and encourage investments in young children's human capital
 - Encourage adoption of parenting practices conducive to early childhood development on nutrition, health, sanitation, and psycho-social stimulation
 - Participation in the Behavioral Component is a "soft condition" to receive cash transfers
- 3 activities per month for each beneficiary during 18 months:
 - Monthly community assemblies delivered by NGO workers
 - Monthly meetings delivered by community educators
 - Monthly household visits by community educators
- Primarily targets beneficiary women, but open to non-beneficiaries in target villages
- Content builds on UNICEF 'Essential Family Practices', but goes beyond by also covering psycho-social stimulation and child protection.

Content of the behavioral change component (14 core themes)

NUTRITION

Exclusive Breastfeeding
Complementary feeding
Malnutrition

HEALTH

Protecting children against diseases
Utilization of health services at first
sign of illness
Hygiene and handwashing
Family Planning

PSYCHO-SOCIAL STIMULATION

Language stimulation
Stimulation through play
School readiness
Brain development
Birth registration, school enrollment
and attendance

CHILD PROTECTION

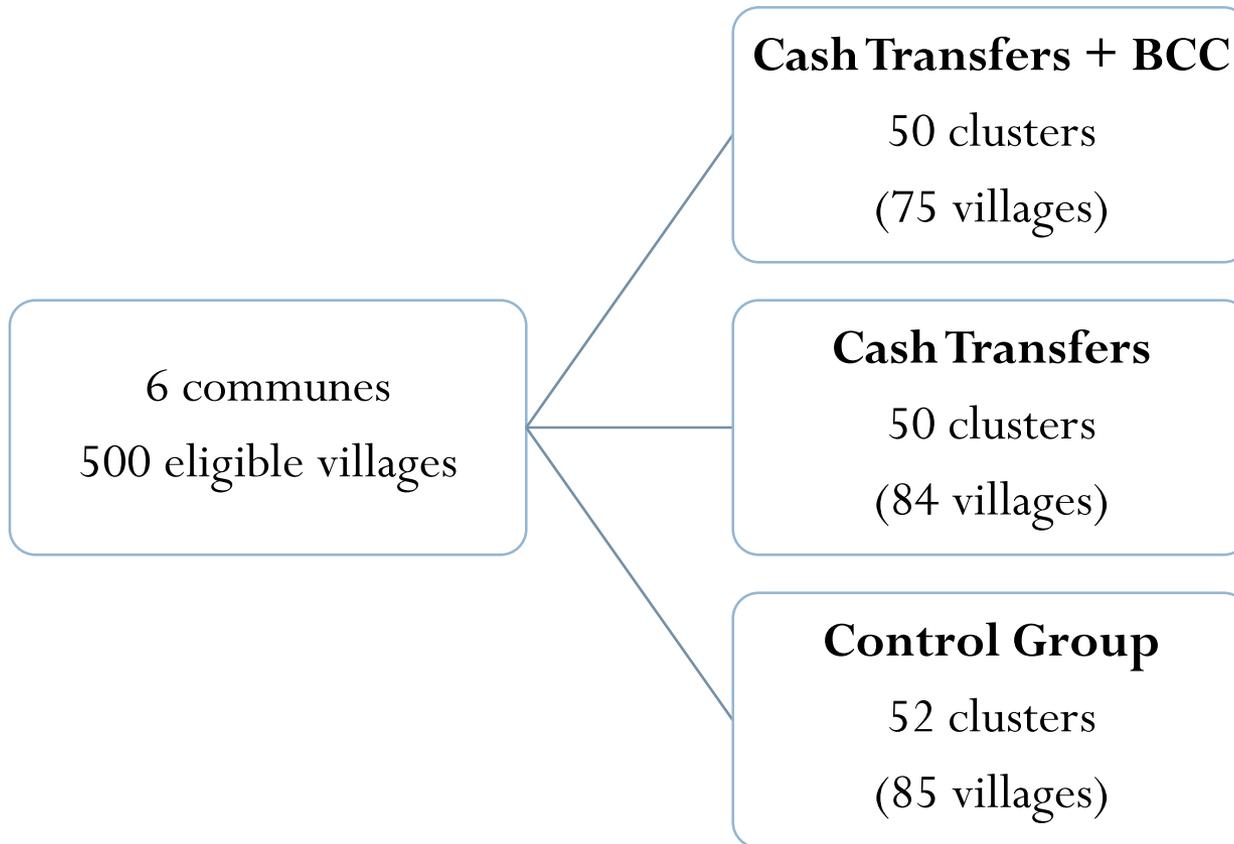
Discipline
Attachment and socio-emotional
development

Main Research Questions

- 1. Relative effects of cash and behavioral change component on early childhood development?**
 1. Changes in parenting practices (intermediary outcomes)
 2. Improvements in children's human capital
 1. Anthropometrics
 2. Child Development: cognitive test (Bayley™) and socio-emotional development (Strength and Difficulty Questionnaire)

- 2. Are there local spill-overs to households not receiving cash transfers in targeted villages?**

Cluster RCT design



Study Design

- **Isolate (marginal) impact of BCC**
 - Comparing actual beneficiaries in groups assigned to cash transfer only (CT) or cash transfers with BCC (CT + BCC)
- **Disentangle effects of cash transfers from behavioral change component**
 - We do not observe who would have been selected in control group
 - Targeting data collected only in treatment groups to select of ~40% beneficiary households
 - We collect similar questions than targeting survey at baseline
 - We can predict “potential beneficiary” status in both control and treatment groups
 - Obtain ITT estimates by comparing “potential beneficiaries”
- **Measure spill-overs**
 - Compare actual non-beneficiaries between CT and CT+BCC arms
 - Compare “predicted non-beneficiaries” between control, CT and CT+BCC arms

Timeline

Baseline Survey

April-June 2012

First cash transfers

Feb-Mar 2013

Final cash transfers

Mar-Apr 2015

Cash Transfers

BCC

Village selection lottery for cash transfers and household census

Targeting data collection

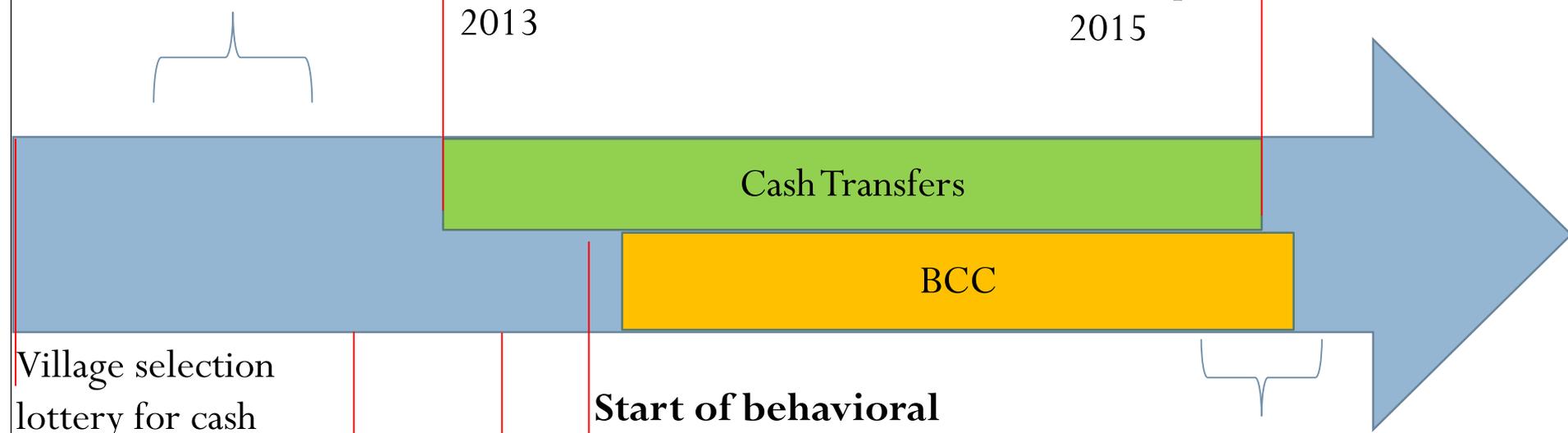
Start of behavioral accompanying measures

Apr 2013

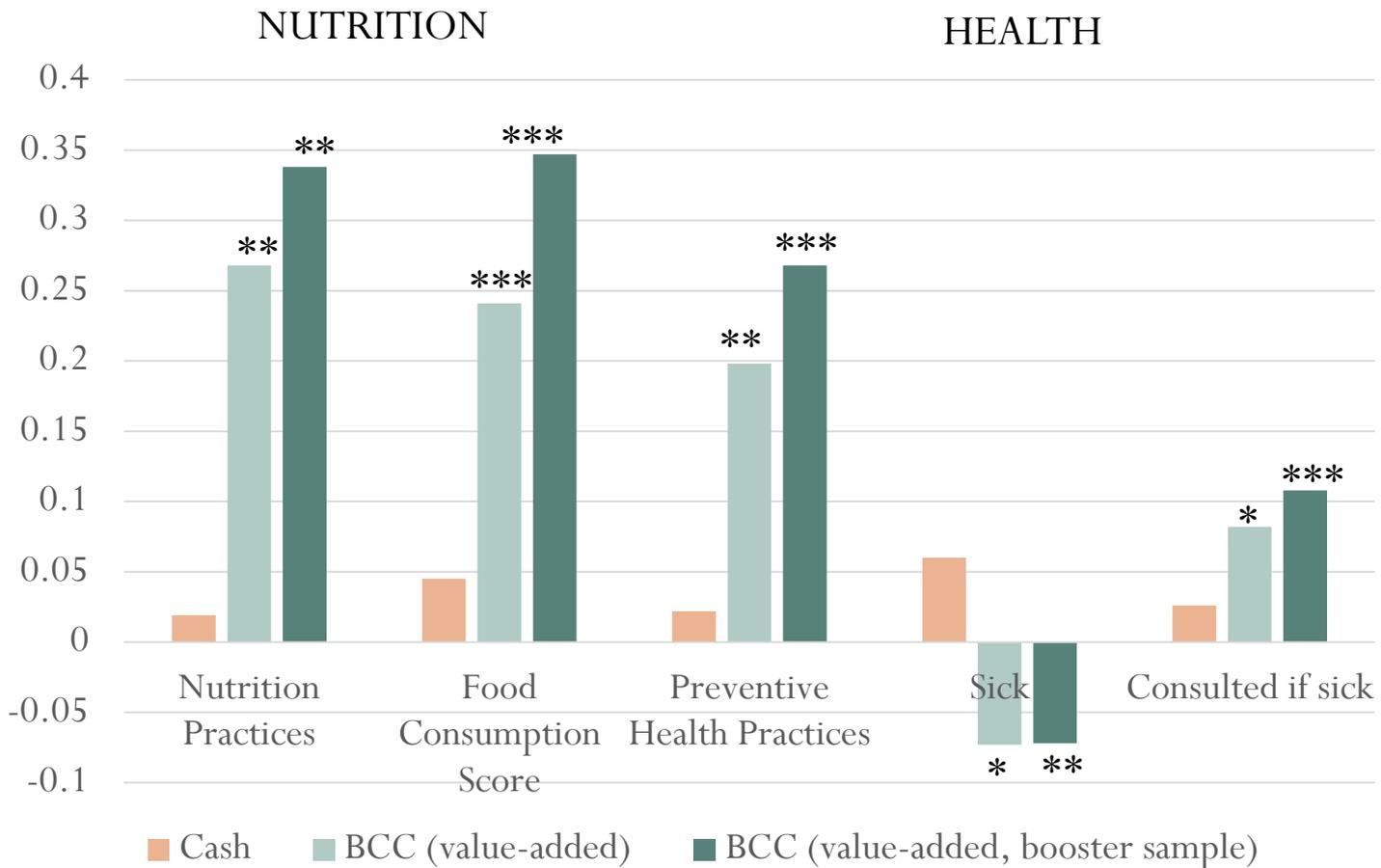
Village selection lottery for behavioral accompanying measures

Follow-up Survey

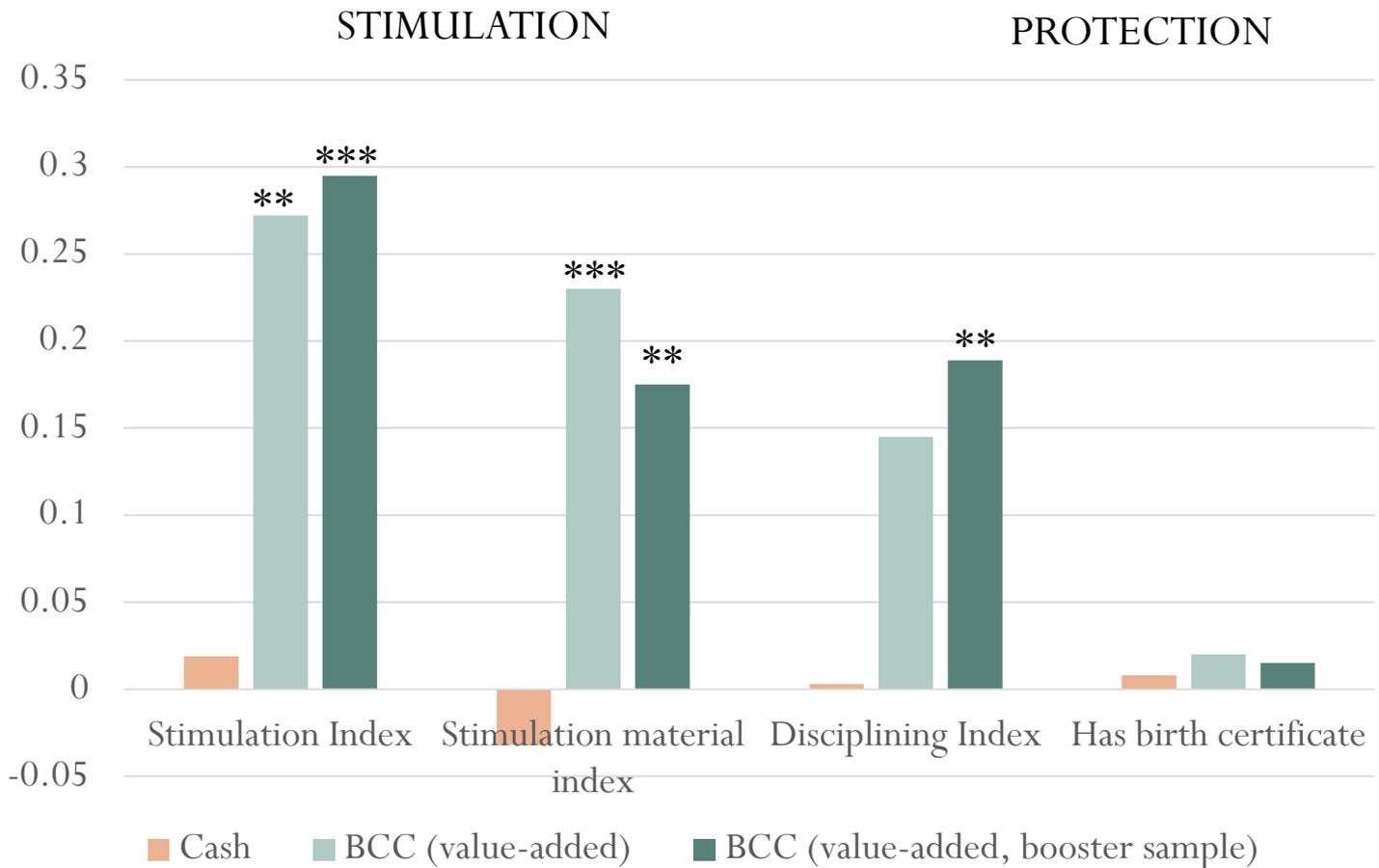
Jan-May 2015



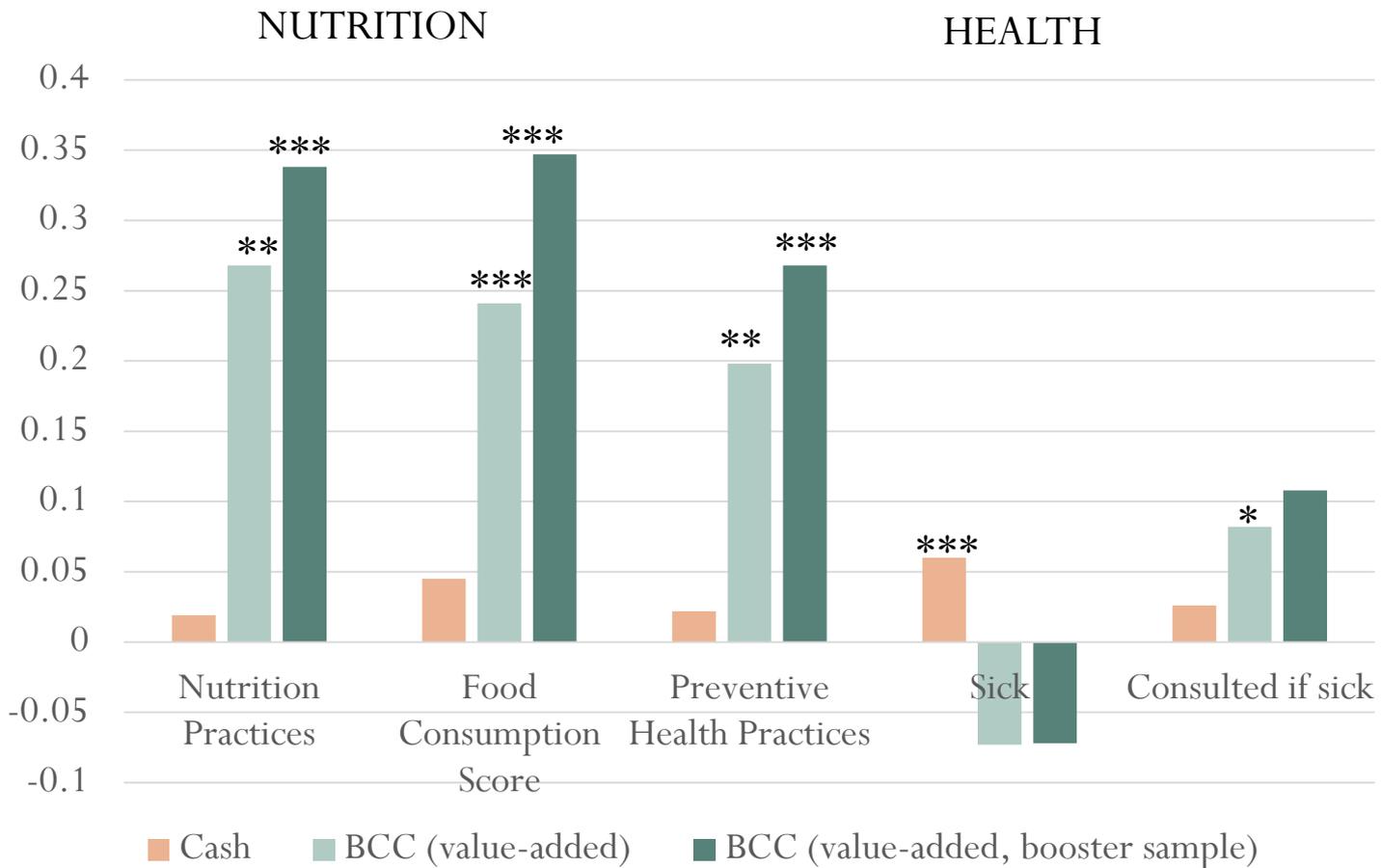
Impacts from BCC (but not cash) on nutrition and health practices



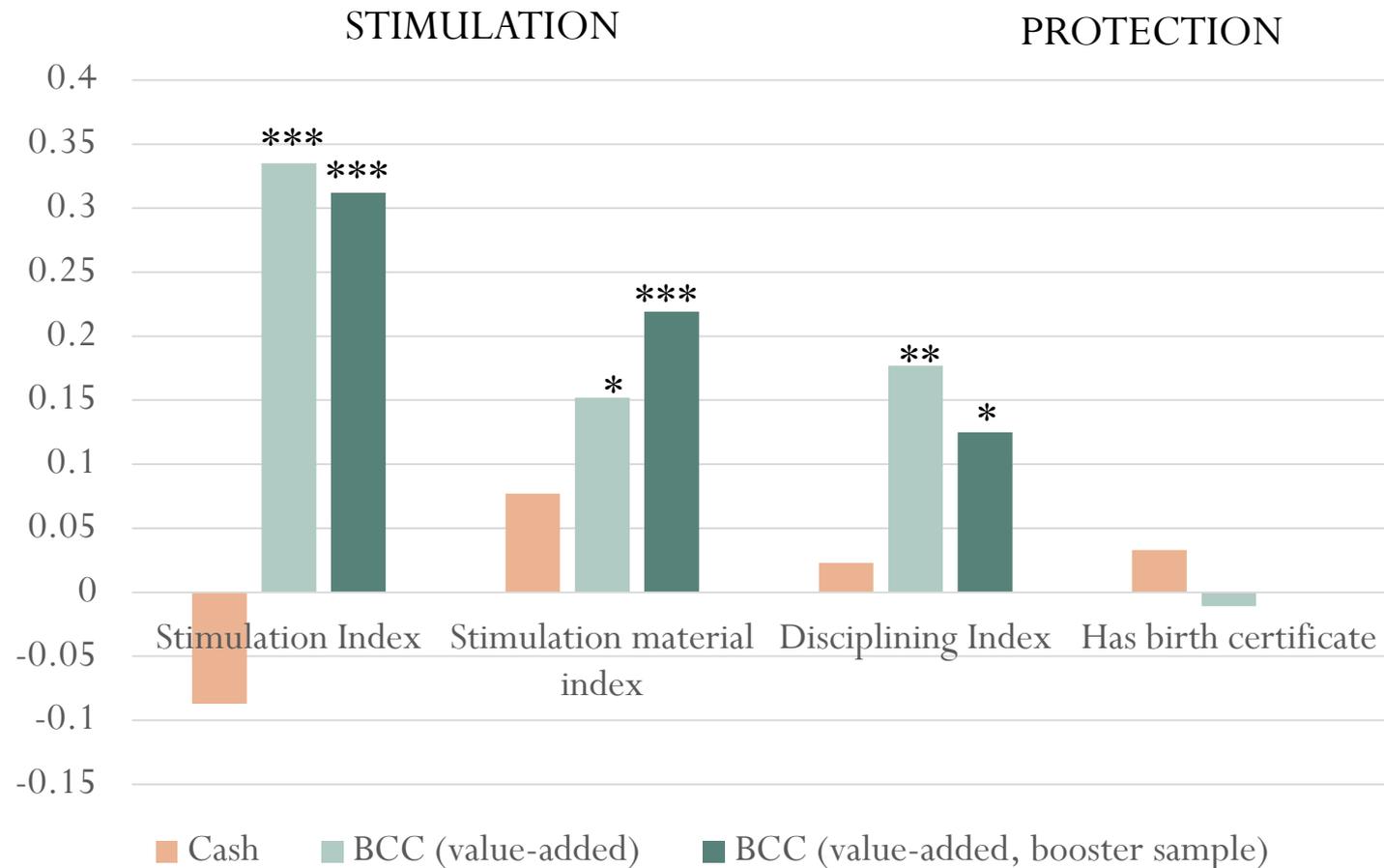
Impacts from BCC (but not cash) on stimulation and protection practices



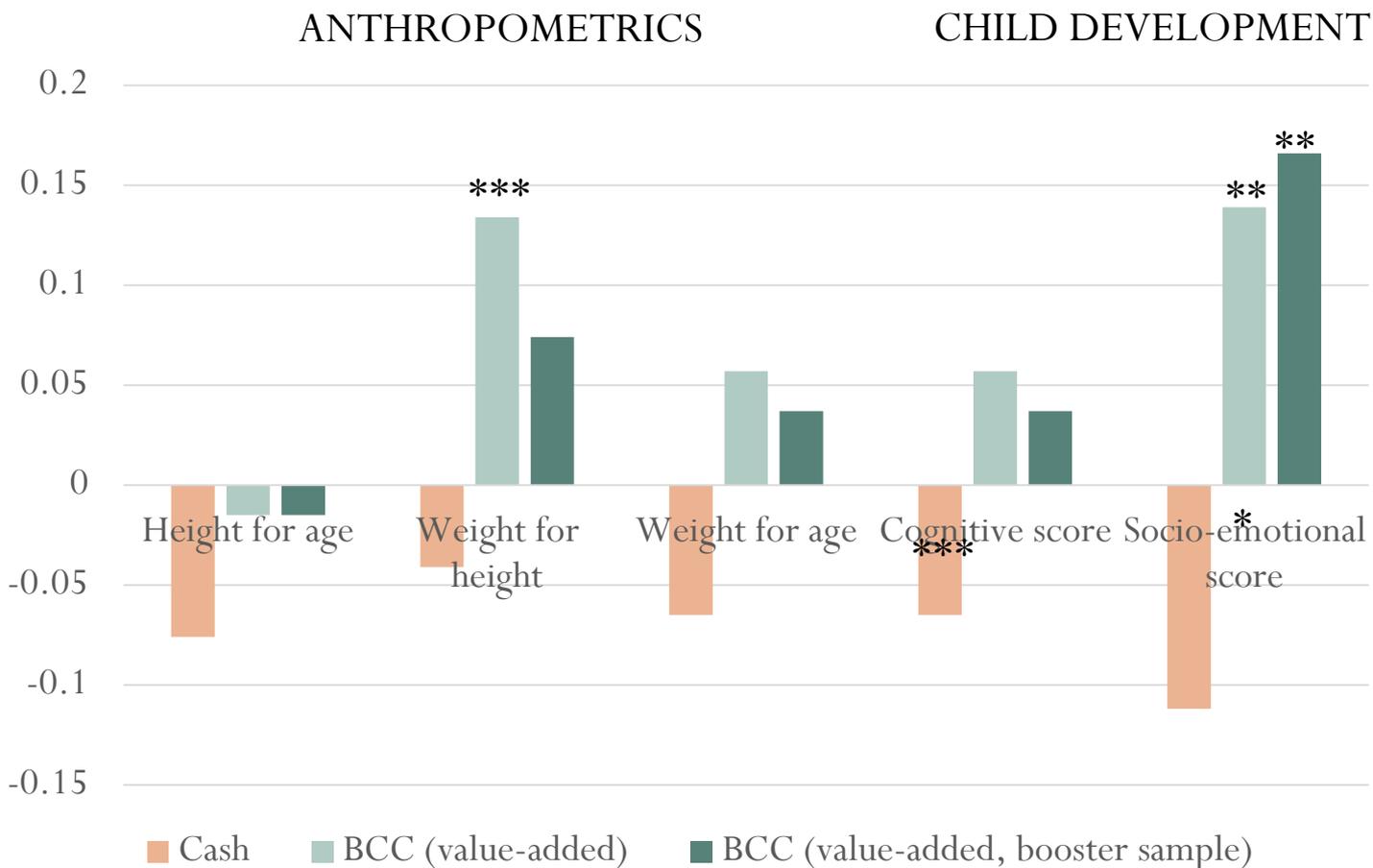
BCC has spill-overs on nutrition and health practices



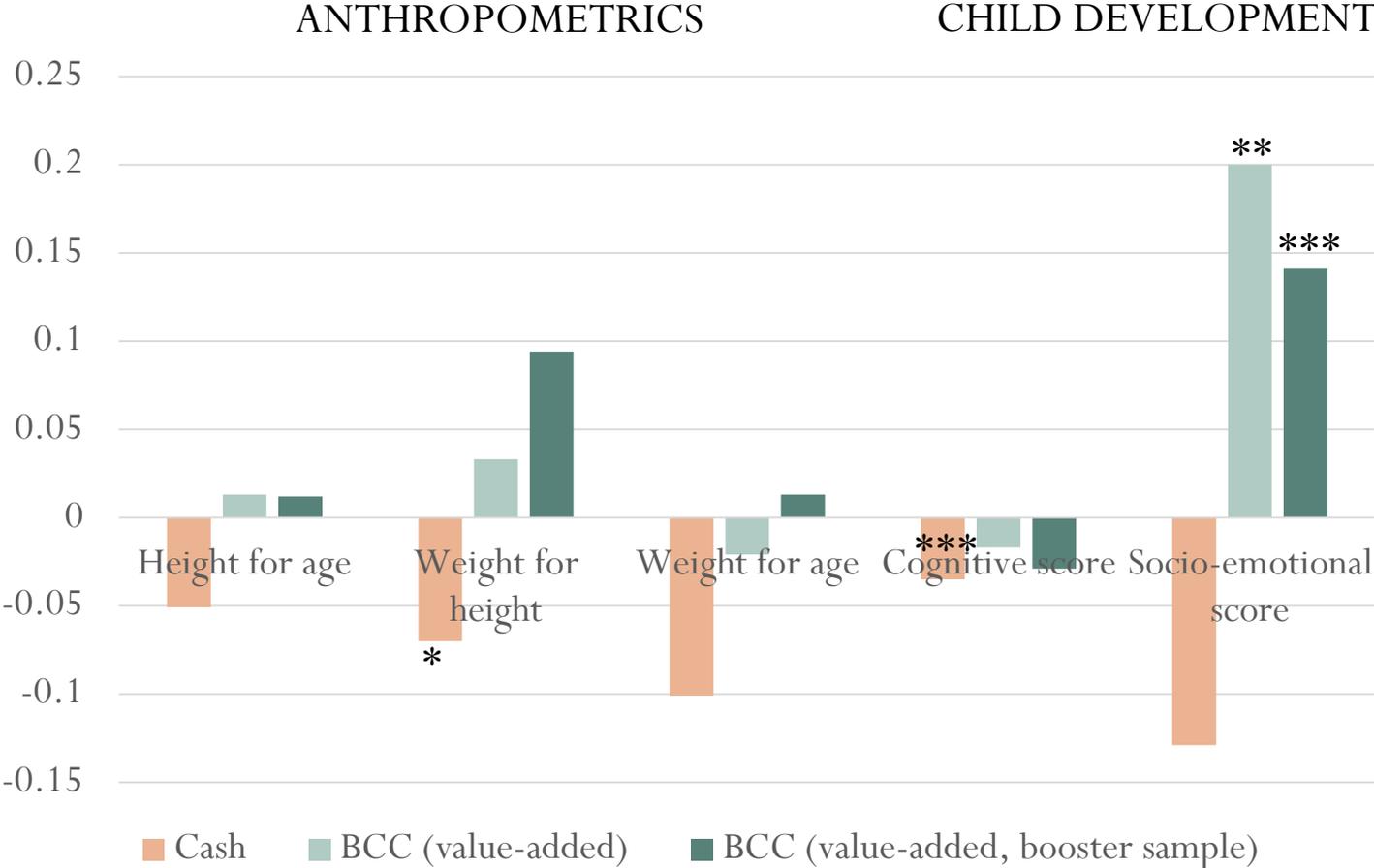
BCC has spill-overs on stimulation and protection practices



But impacts on children's human capital are limited



Spill-overs on children's human capital are also limited



Other mechanisms

- Change in cash transfer spending patterns
 - Cash transfers (without BCC) mostly lead to increase in non-food consumption.
 - Share of food consumption in total consumption decrease
 - BCC keeps share of food consumption in total consumption constant
- Intra-household reallocations
 - CT alone lead to improvement in food security at the household-level (but not in children's dietary diversity)
 - BCC leads to improvements in children's dietary diversity (but not improvements in household –level food security)
- Few effects of cash transfers on human development outcomes of other children or women in the households

Summary

- The behavioral change component leads to a range of changes in parenting practices among cash transfer beneficiaries
 - Impacts not observed for CT only, clearly driven by BCC
- Spill-overs on parenting practices are also observed among households who are not beneficiary of cash transfers in targeted villages
 - Suggests widespread changes in parental knowledge and practices, and related social norms?
- But: behavioral change accompanying measures are not sufficient to improve final outcomes
 - Only small impact on children's socio-emotional development is observed

Interpretation

- Some changes in final outcomes may take more time to materialize?
 - Not clear. Time of exposure is in line with studies where impacts are observed (e.g. Nicaragua or Colombia)
- Extreme poor and highly stressed study context
 - Multiple risk factors (over 90% of caregivers with 0 years of education, limited access to water and sanitation, low-performing health and education services, ...)
- Demand-side interventions may require other complementary interventions to be effective
 - E.g. health, nutrition, or water and sanitation services.
 - Additional research needed to assess potential complementarities between demand-side behavioral change interventions and supply-side service provision

Policy implications (1)

- Parenting interventions worth pursuing to trigger behavioral change in practices
 - Can induce spill-overs, pointing to broader changes in social norms
 - Impacts on practices observed for different types of approaches
 - Possible in high-poverty contexts, and in large-scale government programs
- However these behavioral changes are not always sufficient to improve child development
 - Program design require careful of assessment of other risk factors, and careful attention to content and delivery mechanisms
 - Complementary supply-side interventions may be required

Policy implications (2)

- Unconditional CT are not necessarily/automatically beneficial for children
 - CT have multiple objectives. Welfare effects are well-documented
 - Income effects are not sufficient to foster child development
 - Need to consider specific design elements if objectives are to foster ECD
 - Complementarities between ECD and cash transfers not yet fully clear
 - Fast-growing safety net systems at least constitute a delivery mechanism to deliver additional ECD interventions (ensure targeting, high take-up,...)



THANK YOU