Can a reading aloud intervention buffer impacts of the pandemic on parent-child reading? An experimental study in Brazil

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Background:

The COVID-19 pandemic may compound pre-existing stressors and impact parent-child reading and parenting during the pandemic, particularly in low- and middle-income countries (LMICs). However, there is limited evidence on whether pre-pandemic participation in reading programs promoting cognitive stimulation may buffer COVID-19 impacts on parent-child reading and parenting during the pandemic.

Objective:

To investigate whether 1) a reading aloud program, called *Universidade do Bebê* (UBB), conducted in Brazil prior to the pandemic's onset (Aug 2019 to Mar 2020) can support parenting and parent-child reading during the pandemic, 2) cognitive stimulation mediates effects of UBB on parenting and parent-child book reading during the pandemic, and 3) UBB pre-pandemic buffers associations between COVID-19-related distress and parenting and parent-child reading during the pandemic.

Methods:

This was a secondary analysis of 400 low-income pregnant women and families with children 0-24 months randomized to UBB (n=200) or control groups. UBB consisted of monthly parent workshops focusing on parent-child reading complemented by a lending library. Participants were evaluated pre-pandemic (June 2019) in families' sociodemographics and cognitive stimulation in the home. Re-assessment of cognitive stimulation in April 2020 has shown significant impacts on reading aloud and

parenting practices. Follow up data following pandemic onset was obtained for 133 families (n= 69 UBB; sociodemographics comparable to the full sample), including COVID-19-related distress level, as well as parenting practices to manage children's socioemotional and educational needs and parent-child reading during the pandemic (October 2020).

Results:

Overall, participation in UBB pre-pandemic was associated with parent-child reading (β=0.19, p=0.04), but not parenting (β=0.01, p=0.33), during the pandemic. Indirect effects of UBB through cognitive stimulation were observed for both outcomes (Fig 1). Negative associations between COVID-19-related distress and parenting/parent-child reading (Fig 2) were buffered for the UBB group, but were significant for the control group (parenting: β=-0.30, p=0.04; parent-child reading: β=-0.43, p=0.001).

Conclusion:

Novel empirical evidence suggests that promotion of cognitive stimulation pre-pandemic may buffer impacts on positive parenting and parent-child reading following pandemic onset in LMICs. Findings likely have implications beyond the COVID-19 pandemic for disasters generally.

Fig 1. Indirect effects of UBB parenting and parent-child book reading during the covid-19 pandemic through its impacts on cognitive stimulation in the home. Model adjusted for covariates, baseline cognitive stimulation, and COVID-19-related distress level. β= standardized coefficients.

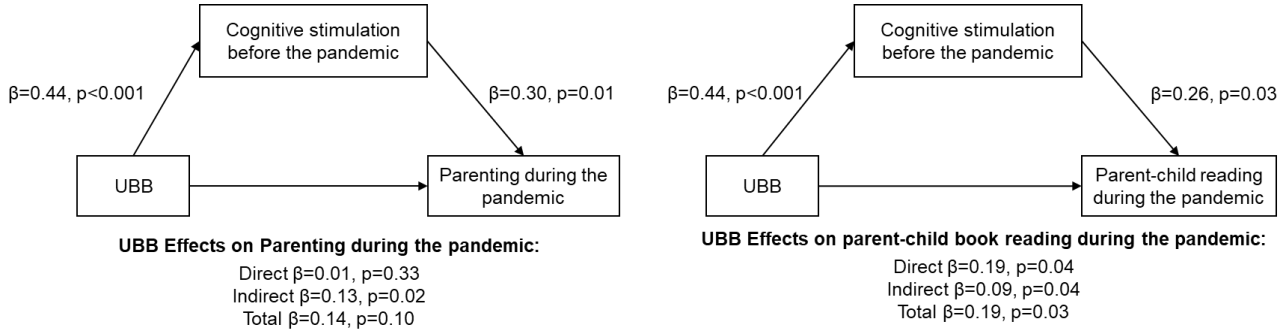

Fig 2. UBB buffered association between COVID-19-related distress level on (A) parenting and (B) parent-child book reading.