



Nudging or Nagging? Conflicting Effects of Behavioral Tools

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Highlights

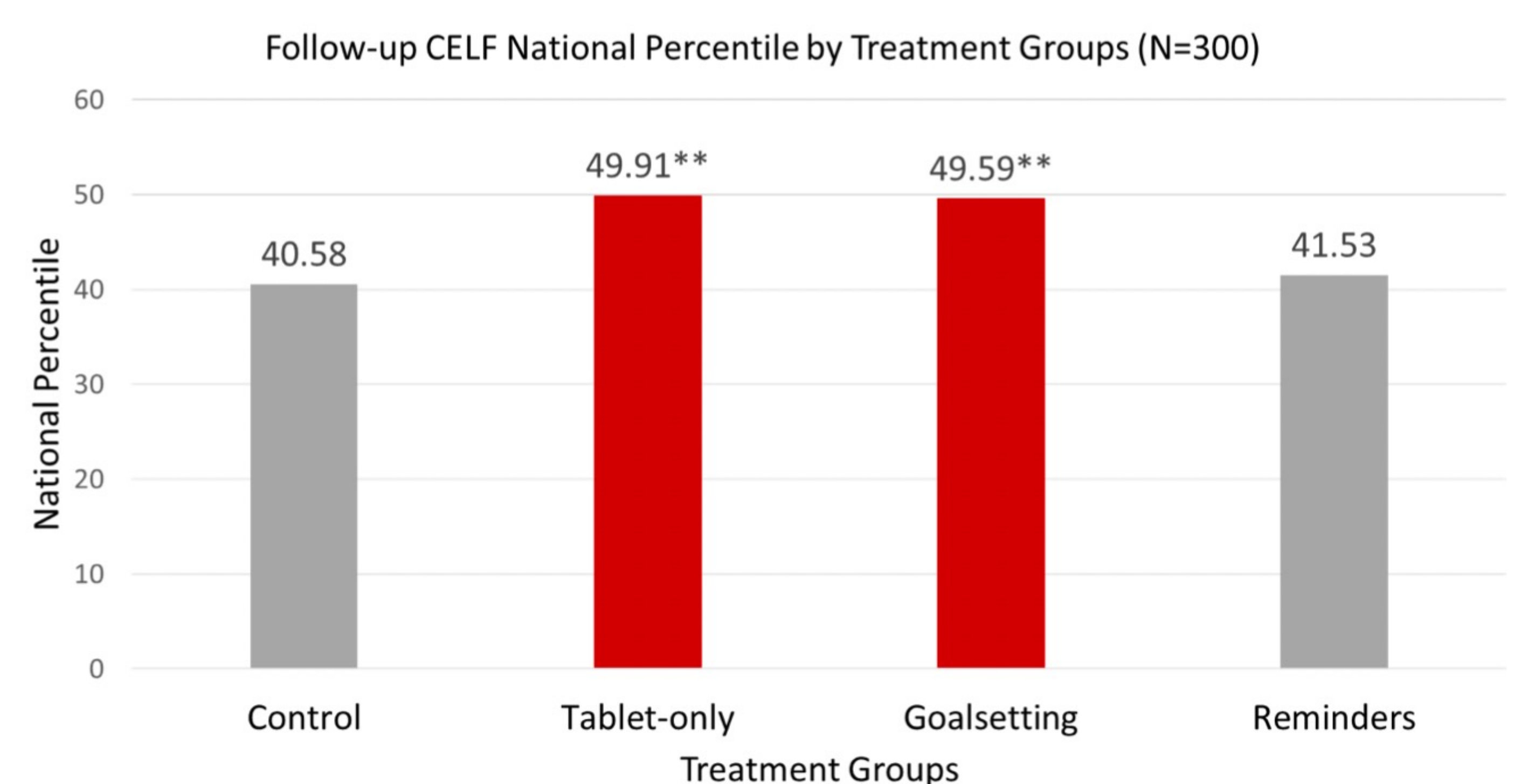
- We conducted an RCT with 379 low-income parents of young children in Chicago with the aim of increasing parental reading time and child literacy skills.
- We gave parents a tablet with a digital library & tracked reading for 11 months.
- Two nudge treatments were 1) Goalsetting texts and 2) Reminder text messages.
- We find that goalsetting texts increase reading time, but reminder texts do not.
- Goalsetting texts did not change literacy skills despite increasing reading time.
- Reminder texts *decreased* literacy skills despite no change in reading time.
- We also find that the digital library itself caused an increase in literacy skills.

Findings: Test Scores

- Relative to the “Digital Library Tablet Only” group:
- Goalsetting texts caused no statistically significant change in literacy skills.
 - Reminder texts caused a statistically significant *decrease* in literacy skills.
 - All results control for baseline literacy skills, age, and school fixed effects.

- Relative to the Control group:
- The digital library tablet alone causes a 0.30 SD increase in literacy skills.
 - Pooling the 3 treatments together, the effect of the tablet is still 0.20 SD.

Results presented in the bar graph below:



Motivation

- The achievement gap emerges *before* formal schooling begins, and there is a causal link between parental engagement and child academic outcomes.
- Light touch interventions (Mayer et al. 2019, York et al. 2019) show promise in improving parental engagement – specifically, parental reading to children.
- A limitation of York et al. 2019: reading time is self-reported, not measured.
- A limitation of Mayer et al. 2019: no measure of literacy skills.
- The present study uses behavioral nudges to increase parental reading while measuring reading time (via tablet) and measuring literacy skills (CELF-P test).

Experimental Design

Sample: Over 500 families from 13 subsidized preschools in Chicago were recruited to be in the study. Due to COVID, we had high attrition and a final sample of 379.

Outcomes:

- Reading Time (in minutes) in the digital library app over 11 months.
- Literacy Skills (CELF-P exam) at baseline and 11-month follow-up.

Treatment conditions:

- Control (No reading time available)
- Digital Library Tablet Only
- Digital Library Tablet with Reminder Messages
- Digital Library Tablet with Goalsetting Messages

Discussion: Nudging or Nagging?

A model that explains these results involve **nagging** as a byproduct of nudging.

Nag Factor (η) = Percentage decrease in quality of task performance in response to being nudged by someone else to perform the task.

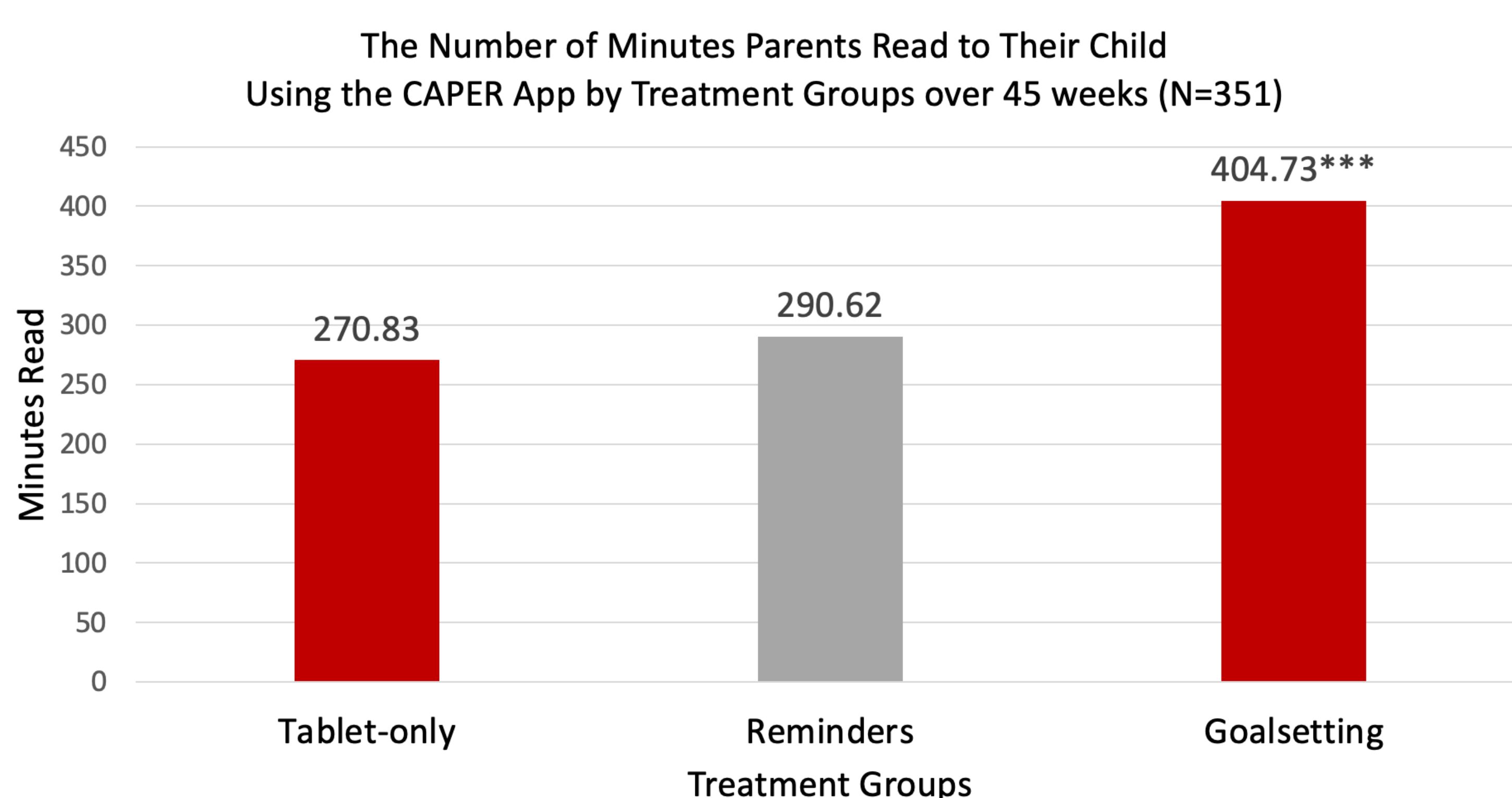
Below is a graph of a hypothetical **Literacy Skills Production** function that maps parental reading time, R , onto child’s literacy skills $f(R)$.

- Point A** represents not receiving any nudge (and therefore no nag factor).
- Point B** represents **reminders**, where the reading amount doesn’t change but literacy skills decrease due to the nag factor.
- Point C** represents **goalsetting**, where reading time is higher, but the nag factor causes the literacy skills to drop to the same level as not receiving a nudge.

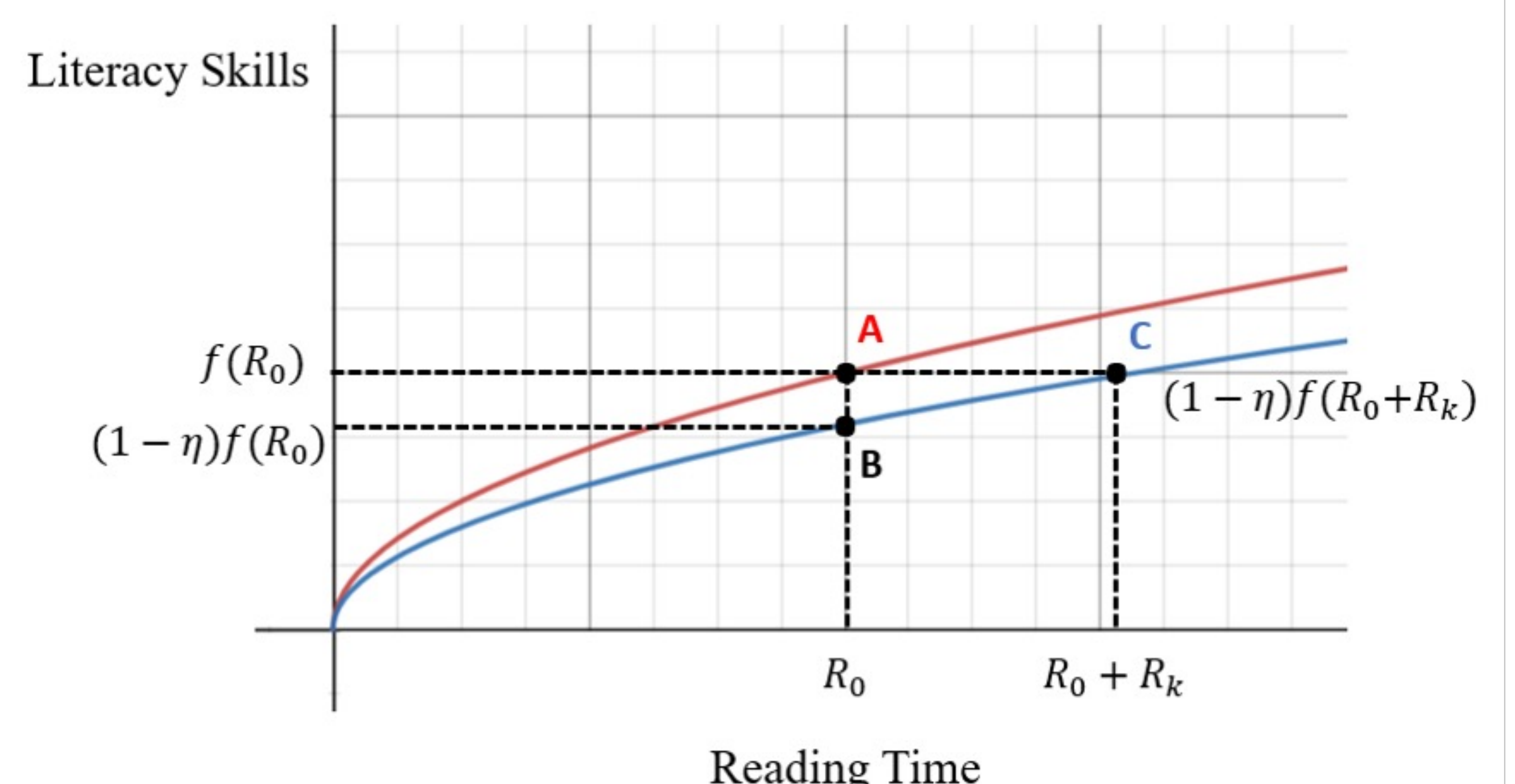
Findings: Reading Time

- Goalsetting text messages caused a 50% (.32 SD) increase in reading time.
- Reminder text messages caused no significant increase in reading time.

Results presented in the bar graph below:



A Model of Literacy Skills Production



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