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.

Motivation
• The achievement gap emerges before formal schooling begins, and there is a causal link between parental engagement and child academic outcomes.
• 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:
1. Reading Time (in minutes) in the digital library app over 11 months.
2. Literacy Skills (CELF-P exam) at baseline and 11-month follow-up.

Treatment conditions:
1. Control (No reading time available)
2. Digital Library Tablet Only
3. Digital Library Tablet with Reminder Messages
4. Digital Library Tablet with Goalsetting Messages

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.

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:

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, \( R_t \), onto child’s literacy skills (\( f(R_t) \)).

• 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.

Motivation

Sample:

Outcomes:

Treatment conditions:

Findings: Reading Time

Findings: Test Scores

Discussion: Nudging or Nagging?

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