

## THE IMPACT OF HOME VISITS AS A FAMILY ENGAGEMENT STRATEGY IN URBAN SCHOOLS

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### STUDY OBJECTIVE

- This study examines the impact of conducting teacher home visits on two important student outcomes: attendance and reading achievement.
- Findings provide evidence on the potential of home visits to be a component of broader school improvement efforts.

## LITERATURE

### Strong school-family relationships can...

- Help families identify and deal with problems contributing to low attendance
- Contribute to enhanced academic performance

### Teacher home visits have been found to...

- Overcome practical challenges for busy families to be involved
- Build common understanding between teachers and families about educational aspirations for the child
- Familiarize teachers with student and family backgrounds and their home contexts
- Enhance teacher perceptions of students' academic engagement and classroom behavior

## KEY CONTRIBUTIONS

### EXISTING STUDIES

Sample sizes small for drawing generalized implications

Sole use of survey data for constructing outcome variables

Mostly qualitative

Primarily focused on early childhood

### CURRENT STUDY

Large sample size (~4000)

Use of measured outcomes such as attendance and reading achievement

Quasi-experimental: use of weighted regression to account for selection into treatment

Sample includes school-aged children (K-5<sup>th</sup>)

## THE INTERVENTION

- Relational teacher home visits
  - Aimed strictly at building personal ties to create trust and mutual respect between teachers & families for constructive, academics-focused partnerships throughout the year
- Teachers were strongly urged to conduct home visits with all their families, but they were **NOT** mandatory.
  - In current sample, 52.49% received a home visit

## RESEARCH QUESTIONS

RQ1

- To what extent were students who received a home visit **attending school on a more regular basis** compared to those whose family did not participate in a home visit?

RQ2

- To what extent were students who received a home visit more likely to **score proficient in reading comprehension** at the end of the school year compared to those whose families did not participate in a home visit?

## DATA

- 12 intervention schools
  - Part of a large urban district
  - Elementary/K-8
- Data from two consecutive school years 2012-13 and 2013-14
  - Student-level demographic information (grade, race, ELL, FRL, IEP), reading comprehension test scores, and attendance
  - Data on which students received home visits

## SAMPLE

- **Sample size**
  - Attendance analysis:  
4664 students
  - Reading comprehension analysis: 3713 students

<i>Variable</i>	<i>N</i>	<i>Mean</i>
Race		
Black	4704	0.62
Hispanic	4704	0.31
Other	4704	0.03
FARM eligible	4704	0.93
Special education	4704	0.18
Limited English Proficient	4704	0.23
Grade level (reference = Pre-elementary)		
Primary	4704	0.41
Upper	4704	0.22
Attendance rate	4664	0.92
Proficiency in reading comprehension	3713	0.68
Baseline attendance rate	3133	0.93
Baseline proficiency in reading comprehension	3713	0.57

## MISSING DATA

- Missing data
  - Missing baseline data for students due to the high student mobility
    - Data missing by an “ignorable” mechanism and not on account of the values of the missing observations (Rubin, 1987)
  - Multiple imputations by chained equations in Stata 13 implemented to impute missing data (20 iterations)
  - All imputed data sets pooled in analysis to further account for uncertainty (Rubin, 2004)

## MATCHING

Accounts for selection of students into home visits (the treatment)

Estimates average treatment effect for the treated (ATT) by applying **weights** to the comparison group to make it representative of treatment group

### Weighted Regression

Desire to know student/family better, student behavior, attendance, and academic performance found to be key factors in selection (Christiansen, 2015)

**Weights** (propensity scores) constructed with estimated probabilities of selection predicted by student demographics & baseline attendance/reading scores

**Doubly robust weighted regression** adjusts additionally for the conditioning variables to further account for the remaining imbalance across these variables

(Morgan & Winship, 2014)

## BALANCE ACROSS KEY VARIABLES THAT DEFINED SELECTION INTO TREATMENT

*Summary of weighted descriptive statistics, averaged across 20 multiply-imputed data sets, illustrating balance across selection variables between students whose families received a home visit from teachers or school staff (treated) and students whose families did not (control)*

<i>Variable</i>	Mean (Treated)	Mean (Control)	Diff (T-C)	%bias
Race				
Black	0.58	0.58	0.00	-0.47
Hispanic	0.33	0.33	0.00	-0.36
Other	0.04	0.04	0.00	1.06
FARM eligible	0.94	0.94	0.00	-0.84
Special education	0.17	0.17	0.00	-0.43
Limited English Proficient	0.26	0.26	0.00	0.63
Grade level (reference = Pre-elementary)				
Primary	0.43	0.43	0.00	-0.29
Upper	0.17	0.17	0.00	0.51
Baseline attendance rate	0.86	0.86	0.00	-2.68
Baseline proficiency in reading comprehension	0.53	0.54	-0.01	-1.97

## STUDY FINDINGS

## ATTENDANCE OUTCOMES

Summary of weighted regression analysis of squared attendance rates (SY 2013-14)—results pooled across 20 sets of multiple-imputed data (N=4664)

Variable	$\beta$	SE	t	p
Home visit participant	0.02**	0.01	4.12	0.003
Race				
Black	-0.03	0.02	-1.47	0.176
Hispanic	-0.00	0.02	-0.15	0.885
Other	0.00	0.02	0.04	0.970
FARM eligible	-0.03 <sup>†</sup>	0.01	-2.22	0.055
Special education	-0.01	0.01	-0.58	0.575
Limited English Proficient	0.03**	0.01	4.22	0.003
Grade level (reference = Pre-elementary)				
Primary	0.03**	0.01	5.45	<0.001
Upper	0.03**	0.01	4.73	0.001
Baseline attendance rate	0.38***	0.03	11.10	<0.001
Baseline proficiency in reading comprehension	0.01	0.01	0.83	0.434
Constant	0.55***	0.03	16.74	<0.001

Note: The standard errors have been adjusted for the nesting of individuals within school clusters.

## READING PROFICIENCY OUTCOMES

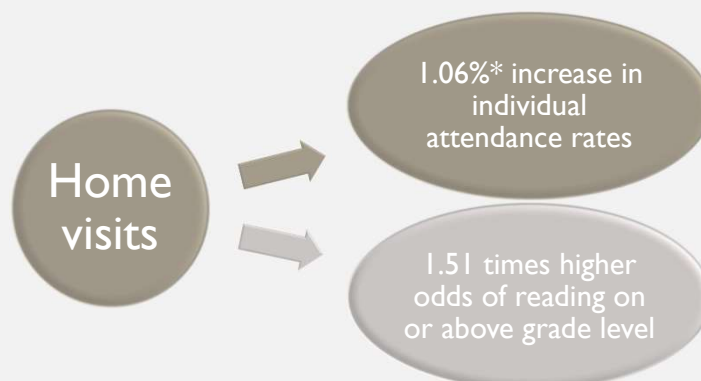
Results from logistic regression analysis of proficiency in reading comprehension (SY 2013-14) reported in odds ratios—results pooled across 20 sets of multiple-imputed data (N= 3713)

Variable	$\beta$	OR	SE	t	p
Home visit participant	0.41**	1.51	0.14	3.04	0.002
Race					
Black	-0.16	0.86	0.49	-0.30	0.761
Hispanic	0.18	1.20	0.44	0.41	0.679
Other	0.18	1.21	0.65	0.29	0.772
FARM eligible	0.23	1.26	0.40	0.59	0.557
Special education	-0.91***	0.40	0.19	-4.78	<0.001
Limited English Proficient	-0.75***	0.49	0.20	-3.69	<0.001
Grade level (reference = Pre-elementary)					
Primary	0.83*	2.29	0.33	2.49	0.013
Upper	0.78*	2.18	0.31	2.47	0.013
Baseline attendance rate	0.48	1.66	0.45	1.11	0.266
Baseline proficiency in reading comp.	2.65***	14.11	0.33	8.13	<0.001
Constant	-1.51	0.21	0.86	-1.79	0.073

Note: The standard errors have been adjusted for the nesting of individuals within school clusters.

## IMPLICATIONS

- Relational teacher home visits when utilized as part of a broader family engagement strategy can help develop relations with families that lead to improved student outcomes



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THANK YOU FOR  
LISTENING!

If you have any further questions, please email us!

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