Impacts of Home Visits on Students in District of Columbia Public Schools

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Impacts of Home Visits on Students in District of Columbia Public Schools

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This study examined the impacts of structured relationship-building teacher home visits conducted in grades 1–5 as part of a family engagement program in the District of Columbia Public Schools. Using a matched comparison group research design, the study measured the impacts of the home visits on student disciplinary incidents and attendance. The study found that a home visit before the start of the school year reduced the likelihood of a student having a disciplinary incident in that school year. During the school year following a home visit, 9.27 percent of visited students had a disciplinary incident compared with 12.22 percent of nonvisited comparison students. The study also found that, on average, a home visit slightly improved student attendance. The attendance rate averaged 95.28 percent for visited students and 94.93 percent for nonvisited comparison students.

Why this study?

Parent engagement is an important factor in student education outcomes. Substantial evidence indicates that higher parent engagement is associated with better student outcomes, such as improved behavior, attendance, and academic and social-emotional development (Bowman et al., 2001; Dearing et al., 2006; Epstein, 2011; Fan & Chen, 2001; Fantuzzo et al., 2004; Grolnick et al., 2000; Henderson & Mapp, 2002; Jeynes, 2005, 2007; Ma, 1999; McNeal, 1999; Pomerantz et al., 2007; Scher, 2016; Sheldon, 2007; Sheldon & Jung, 2015, 2018; Sheridan et al., 2019).

In recent years schools and districts have increasingly implemented policies and programs intended to improve parent engagement in education (Kamenetz & Turner, 2017; Knowledge Is Power Program, 2017; Kronholz, 2016). The nonprofit organization Parent Teacher Home Visits indicated that more than 700 schools in 28 states and the District of Columbia had implemented its home visit model as of 2020 (Parent Teacher Home Visits, 2021). Across the country more than 200 charter schools in the Knowledge Is Power Program network use home visits, phone calls, emails, and parent-teacher conferences to communicate with their students’ parents (Knowledge Is Power Program, 2017).

Little evidence exists on the effectiveness of these school policies and programs. Some research indicates that structured relationship-building teacher home visits show promise for improving parent engagement and student outcomes. But the evidence is sparse and rarely drawn from high-quality study designs (Jeynes, 2012; Scher, 2016; Sheldon & Jung, 2015; Wright et al., 2018). (For further discussion of the relevant literature, see appendix A.)

The District of Columbia Public Schools (DCPS) partnered with the Regional Educational Laboratory (REL) Mid-Atlantic to develop high-quality evidence on the impacts of structured relationship-building teacher home visits conducted as part of DCPS’s two family engagement programs: the Family Engagement Partnership.

1. In contrast, a relatively large amount of research examines the effectiveness of home visits that provide early education and public health services to pregnant women and families with young children. See https://homvvee.acf.hhs.gov/ for a federally funded evidence review of the effectiveness of early childhood home visit models.
(FEP) and the Family Engagement Collaborative (FEC). The FEP, based on the Parent Teacher Home Visits model and developed by the Flamboyan Foundation, is a schoolwide program for elementary and middle schools that trains teachers on how to conduct structured relationship-building home visits with their students’ parents and provides financial incentives for teachers to conduct the visits. The program also involves several non–home visit components, including observations and feedback on teachers’ family engagement practices; training on an alternative style of parent-teacher conferences; coaching and professional learning community meetings for school leaders; and curricula, tools, and data management systems. The FEC is a smaller home visit program for pairs of teachers in non-FEP schools that involves the same home visit training and procedures as the FEP and professional learning communities for the teachers. For methodological reasons, described in appendix D, the analyses in this report focus exclusively on the FEP.

This study examined the impacts of home visits conducted by teachers in FEP schools before the start of the 2014/15–2016/17 school years on the outcomes of visited students in grades 1–5 in those years. The study focused on outcomes measured by the end of each school year.

The study provides rigorous evidence on the effectiveness of school-based, structured relationship-building teacher home visits. The findings can help DCPS decide how to use its resources to improve parent engagement. The findings could also be useful to other education agencies in the REL Mid-Atlantic region and across the country that are trying to improve parent engagement. For example, the study findings could inform the Maryland State Department of Education’s efforts to promote family engagement and school readiness through its Judith P. Hoyer Center Early Learning Hubs, commonly called “Judy Centers.” Staff at the Curtis Bay Judy Center in Baltimore launched the Curtis Bay Judy Center Home Visiting Project in 2017 after attending the Flamboyan Foundation’s home visit training (Maryland State Department of Education, 2019). Evidence from this study could spur interest in home visits among Judy Centers throughout Maryland.

The Family Engagement Partnership program

The FEP is a schoolwide home visit and family engagement program for elementary and middle schools. It was developed and implemented by the Flamboyan Foundation, a private foundation that partners with DCPS on some of its family engagement initiatives (table 1). Schools apply to participate in the FEP and are chosen by the Flamboyan Foundation based on an assessment of school leaders’ commitment to family engagement, their ability to implement schoolwide changes, and teachers’ interest in receiving family engagement training. Across the study period about half of the schools that applied were selected (E. VanHouten, personal correspondence, May 24, 2021).

During the summer before the school year, Flamboyan Foundation staff provide teachers in FEP schools with two to three hours of training in conducting home visits and communicating with parents. During the training parents and teachers share home visit experiences, and staff explain the key components of home visits; how to approach, plan, and conduct visits; how to sustain families’ trust and maintain communication after visits; and how to overcome common challenges.

After the training teachers are encouraged to visit their students’ families, though the home visits are voluntary for both the teachers and the families. While teachers are encouraged to visit a strategic cross-section of students, they can select who to visit and when. Pairs of teachers conduct the home visits together either over the summer or during the school year. The visits typically last 30 minutes and are supposed to involve introductions, time to get to know each other, discussions of the parents’ hopes and dreams for their child’s education and future, an invitation to continue building the relationship, and a discussion of the parents’ communication preferences. Teachers receive approximately $34 per visit for up to one visit per student per school year.

The FEP also involves several non–home visit components provided by Flamboyan Foundation staff. These components include observations of teachers and feedback on their family engagement practices; training for teachers on a nontraditional style of parent-teacher conference, called academic parent-teacher teams, in which teachers lead meetings with the families of all students in a given classroom and stress how families can support their children academically; twice monthly coaching for school leaders; quarterly professional learning community meetings for school leaders; and curricula, tools, and data management systems (DCPS staff, personal communications, November and December 2017; Sheldon & Jung, 2015).

Research questions

This study analyzed administrative and home visit program data provided by DCPS to address two primary research questions and one secondary research question:3

Primary research questions

1. What is the impact of structured relationship-building home visits on student disciplinary incidents in grades 1–5?

2. What is the impact of home visits on student attendance in grades 1–5?

3. The study originally sought to address additional research questions that ultimately could not be addressed because of data limitations. These questions are described in appendix D.
**Secondary research question**

3. What is the impact of home visits on math and English language arts achievement in grades 4 and 5?

The primary research questions focus on student behaviors that DCPS believed, based on research, home visits might affect positively and relatively quickly. DCPS anticipated that the structured home visits would foster trusting relationships among teachers, visited students, and visited students’ families. These strong relationships, in turn, could lead to greater engagement in learning by both the students and their parents. Consequently students might exhibit fewer in-school behaviors that result in disciplinary action (Fantuzzo et al., 2004; Henderson & Mapp, 2002; Pomerantz et al., 2007; Sheridan et al., 2019), and parents might do more to ensure that their children attend school regularly (Henderson & Mapp, 2002; Scher, 2016; Sheldon, 2007; Sheldon & Jung, 2015, 2018).

In contrast to the primary research questions, DCPS did not have clear expectations concerning the answer to the secondary research question before the study began. Whereas students and their families arguably could adjust behaviors such as attendance relatively quickly, any improvements in student achievement in math and English language arts resulting from home visits might take longer (perhaps multiple school years) to emerge. Achievement might improve as parents learned how to better support their children at home academically and as the benefits of regular attendance without disciplinary incidents accumulated for the students.

The impact of home visits on math and English language arts achievement in grades 4 and 5 was also considered a secondary research question because of the smaller sample sizes associated with these analyses (compared with the sample sizes for the primary research questions).

The data sources, samples, and methods used to address these research questions are summarized in box 1 and detailed in appendix B.

**Box 1. Data sources, sample, methods, and limitations**

**Data sources.** The study team obtained data on kindergarten–grade 5 students from the 2012/13–2016/17 school years. The study focused on students in grades 1–5; however, data on students in kindergarten were used as baseline data for matching. Student demographic, enrollment, attendance, disciplinary, and achievement data were from District of Columbia Public Schools (DCPS) administrative data sources. Data on Family Engagement Partnership (FEP) home visits were from the Flamboyan Foundation’s FEP home visit data system and included the date of each visit and the names of the student and teachers who participated. The study team also obtained census block group characteristics from publicly available U.S. Census Bureau data files.

**Sample.** The eligible study sample included students who were in grades 1–5 at any point during the 2014/15–2016/17 school years. To be included in the sample in a given school year, students had to have been enrolled in the same traditional DCPS school from October 1 through June 1. Traditional DCPS schools include all schools not designated as adult education, special education, or youth engagement schools. The analysis further restricted the FEP sample to students who received their first FEP visit of a given school year before the start of that school year. The main sample consisted of 3,996 student-year observations in grades 1–5 (1,984 in the FEP group and 2,012 in the comparison group). About 56 percent of the student-year observations were for Black students, 31 percent were for Hispanic students, 10 percent were for White students, and 4 percent were for students of other race/ethnicity. In comparison, among all DCPS students in grades 1–5 in the same period, 62 percent were Black, 19 percent were Hispanic, 14 percent were White, and 4 percent were of other race/ethnicity (see table B2 in appendix B). The sample for the analysis of student achievement (research question 3) was restricted to 1,326 student-year observations in grades 4 and 5 (663 in the home visit group and 663 in the comparison group).

4. All else being equal, smaller sample sizes lead to decreased statistical power, meaning that the study design has less ability to distinguish real impacts from chance differences.
Methodology. The study team estimated the impacts of a home visit before the start of the school year on student outcomes in that school year. First, propensity scores were used to match students who received home visits to similar students who did not. This approach produced home visit and comparison groups that were intended to meet What Works Clearinghouse version 4.1 baseline equivalence standards for all five outcomes of interest in each of the three outcome years (see appendix C). In other words the two groups were similar on key measures before teachers visited the FEP students. Regression analysis was then used to compare outcomes of visited students with outcomes of the matched comparison students. Data were combined across three school years (2014/15–2016/17) to estimate the average impact of a home visit on disciplinary incidents during the school year following the visit and on attendance rates and student achievement scores measured at the end of that school year.

Limitations. As with all quasi-experimental designs, the propensity score matching design used for this study might not remove all selection bias. The home visit model used by the FEP does not prescribe a student selection mechanism beyond encouraging teachers to be strategic in selecting a cross-section of their students to visit. Matching on and controlling for available student characteristics led to the home visit and comparison groups being similar on observable characteristics (see appendix C), but unobservable differences could have persisted.

For disciplinary incidents the study could not determine whether the observed beneficial impact of summer visits reflected a decrease in the likelihood of visited students having an incident or a decrease in the likelihood of teachers formally reporting incidents that occurred with visited students.

Because of a lack of implementation fidelity data, the study did not explore the degree to which the home visits included the key components of the home visit model or how fidelity (or lack thereof) affected the impacts of the visits.

As with all studies, generalizability is limited because the study took place in a specific location with specific sample members who met specific eligibility criteria. The findings might not generalize to students who change schools during the school year, to all DCPS schools, or to other states or school districts. Nevertheless, the FEP appears to be a program that similar districts could implement with similar results.

More detailed information on the study data sources, sample, and methodology are in appendixes B and C.

Notes
1. The study team defined the eligible sample of students for each of the three school years of the study period and then combined all student-year observations across those three school years to estimate the average impact of the home visits in the year immediately following a summer home visit. Because some students were in the eligible sample for more than one school year, the total number of student-year observations (3,996) exceeds the total number of unique students.

2. Among the grades of interest for this study, only grades 3–5 took the DCPS-administered standardized assessments every year of the study period. The student achievement analysis included test scores for students in grades 3 (baseline for grade 4), 4, and 5.

Findings for the primary research questions

A Family Engagement Partnership home visit before the start of the school year reduced the likelihood of a student having a disciplinary incident in that school year

The study found a significant beneficial impact of FEP home visits on disciplinary incidents (table 2). In the school year following a summer FEP home visit, 9.27 percent of visited students had a disciplinary incident compared with 12.22 percent of comparison students.

The study did not, however, find a measurable impact on serious disciplinary incidents (incidents categorized by DCPS as severe enough to potentially result in suspension or expulsion). The percentage of visited students who had a serious disciplinary incident (8.01 percent) was lower than but not statistically different from the percentage of comparison students who did (9.00 percent). This finding suggests that the nearly 3 percentage point reduction in visited students who had a disciplinary incident might have been driven largely by a decrease in relatively minor incidents.
A Family Engagement Partnership home visit before the start of the school year slightly improved student attendance during that school year, on average

The study found a modest improvement in attendance for visited students. The attendance rate averaged 95.28 percent for students who received a summer FEP home visit and 94.93 percent for comparison students who did not (table 3). These attendance rates do not represent DCPS attendance rates as a whole because of sample restrictions, such as limiting the sample to students who enrolled in the same traditional DCPS school from October 1 through June 1. The District of Columbia Office of the State Superintendent of Education (2019) has found that District of Columbia students who change their school or their residential address tend have lower attendance rates after the move.

Table 3. In the school year after a summer Family Engagement Partnership home visit, visited students had a slightly higher—and statistically distinguishable—attendance rate than comparison students

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mean (percent)</th>
<th>Impact estimate (percentage points)</th>
<th>Standard error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home visit</td>
<td>Comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance rate</td>
<td>95.28</td>
<td>94.93</td>
<td>0.35*</td>
<td>0.14</td>
</tr>
<tr>
<td>Number of student-year observations</td>
<td>1,984</td>
<td>2,012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at \( p < .05 \).

Note: The comparison group mean is the unadjusted mean outcome for the comparison group. The home visit mean is the regression-adjusted mean outcome for the home visit group and is equal to the comparison group mean plus the impact estimate. The regressions used to estimate impacts controlled for student gender, race/ethnicity, and grade; baseline measures of the student’s outcome, free lunch status, English learner status, over-age for grade status, and the percentage of individuals in the student’s census block group who did not have a high school diploma or GED; school-grade-year means of gender, race/ethnicity, and the preceding baseline characteristics; a baseline measure of the student’s special education status; and year. The regressions used robust standard errors that accounted for clustering of students within school-grade-years and a weight to ensure that standard errors accounted for some home visit students being matched to more than one comparison student. For attended school the unadjusted standard deviation is 29.01 for the home visit group and 32.76 for the comparison group. For had a disciplinary incident the unadjusted standard deviation is 27.08 for the home visit group and 28.62 for the comparison group. Using Hedges’ \( g \) corrected for small-sample bias, the effect size is \(-0.10\) for had a disciplinary incident and \(-0.04\) for had a serious disciplinary incident. Using the Cox index, the effect size is \(-0.19\) for had a disciplinary incident and \(-0.08\) for had a serious disciplinary incident.

Source: Authors’ analysis of District of Columbia Public Schools administrative data, U.S. Census Bureau data files, and Flamboyan Foundation data on Family Engagement Partnership home visits.
Findings for the secondary research question

*A Family Engagement Partnership home visit had no measurable impact on English language arts achievement but a small positive impact on math achievement in grades 4 and 5*

The study found that a summer FEP home visit improved math achievement but not English language arts achievement at the end of the school year following the visit (table 4). Compared with matched comparison students, visited students had similar end-of-year achievement z-scores in English language arts (−0.15 for visited students and −0.18 for comparison students) but slightly higher scores in math (0.03 for visited students and −0.08 for comparison students).

Implications

This study provides evidence that can help support DCPS in deciding whether to continue structured relationship-building home visits. The favorable impacts on student disciplinary incidents, attendance, and math achievement provide DCPS with a reason to continue—and perhaps consider expanding—home visits as part of the district’s family engagement efforts.

DCPS might also explore whether home visits could aid the district’s efforts to promote equitable student outcomes. For example, DCPS seeks equity in student discipline (District of Columbia Public Schools, 2018). Black students, male students, and students with disabilities tend to be disciplined at higher rates than other students (LaCoe & Manley, 2019; Nowicki, 2018). Home visits might help address inequities in discipline if the beneficial impacts of home visits on student disciplinary incidents apply to these student subgroups and if teachers routinely complete visits with these subgroups. The study did not estimate impacts on discipline inequities because of the relatively small size of the study sample and the lack of data on attempted home visits. Collecting and analyzing information on which students teachers attempt to visit could reveal whether particular types of students

### Table 4. A Family Engagement Partnership home visit had a positive impact on math achievement in grades 4 and 5 but not English language arts achievement

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mean (percent)</th>
<th>Impact estimate (z-score)</th>
<th>Standard error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home visit</td>
<td>Comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math achievement</td>
<td>0.03</td>
<td>−0.08</td>
<td>0.11***</td>
<td>0.03</td>
</tr>
<tr>
<td>English language arts achievement</td>
<td>−0.15</td>
<td>−0.18</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Number of student-year observations</td>
<td>663</td>
<td>663</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at p < .001.

Note: Achievement refers to scores on the District of Columbia Comprehensive Assessment System (DC CAS) for the 2013/14 school year and scores on the Partnership for Assessment of Readiness for College and Careers (PARCC) assessment for the 2014/15–2016/17 school years. To express scores in a common unit, DC CAS and PARCC scale scores for the DCPS test-taking population were converted to z-scores using the means and standard deviations for each assessment. Z-scores have a mean of 0 and a standard deviation of 1 within each grade-year. The comparison group mean is the unadjusted mean outcome for the comparison group. The home visit mean is the regression-adjusted mean outcome for the home visit group and is equal to the comparison group mean plus the impact estimate. The regressions used to estimate impacts controlled for student gender, race/ethnicity, and grade; baseline measures of the student’s outcome, free lunch status, English learner status, over-age for grade status, and the percentage of individuals in the student’s census block group who did not have a high school diploma or GED; school-grade-year means of gender, race/ethnicity, and the preceding baseline characteristics; a baseline measure of the student’s special education status; and year. The regressions used robust standard errors that accounted for clustering of students within school-grade-years and a weight to ensure that standard errors accounted for some home visit students being matched to multiple comparison students. For math achievement the unadjusted standard deviation is 0.93 for the home visit group and 0.88 for the comparison group. For English language arts achievement the unadjusted standard deviation is 0.90 for the home visit group and 0.87 for the comparison group. Using Hedges’ g corrected for small-sample bias, the effect size is 0.12 for math achievement and 0.03 for English language arts achievement.

Source: Authors’ analysis of District of Columbia Public Schools administrative data, U.S. Census Bureau data files, and Flamboyan Foundation data on Family Engagement Partnership home visits.
tend to be visited more than others. Information on unsuccessful attempts could help identify impediments to scheduling and completing visits that the district could then address.

The finding that home visits appear to have reduced the likelihood of students having relatively minor disciplinary incidents without measurably affecting the occurrence of more serious incidents might represent further evidence of home visits being a strategic opportunity for DCPS, signal a limitation of the study, or both. If actual minor disciplinary incidents decline by virtue of home visits, all students benefit. It could be the case, however, that student misbehavior does not change but that interacting with visited students’ families makes teachers less inclined to punish and formally report the misbehavior of visited students, particularly for relatively minor incidents that teachers have the discretion to handle without involving school administrators.

Understanding the implications of such underreporting was beyond the scope of this study. Teachers failing to discipline students for actions that are detrimental to the learning environment would be cause for substantial concern. Alternatively, teachers successfully addressing minor behavioral infractions without involving the school’s disciplinary system could have neutral or positive effects. Evidence suggests that school discipline can negatively affect the disciplined students (Fabelo et al., 2011; Lacoe & Steinberg, 2019). A decrease in the formal punishment and reporting of behavioral infractions therefore could be viewed as a positive outcome. It might also promote equity by reducing disproportionality in school discipline.

The COVID-19 pandemic forced DCPS to cancel its home visit programs for the 2020/21 school year. Although school buildings are likely to be open for the 2021/22 school year, many teachers and families might hesitate to participate in home visits while COVID-19 remains a threat. For those teachers and families the online communication tools that were rapidly adopted for virtual instruction over the last year might create a new opportunity for remotely conducted virtual home visits. DCPS could take advantage of its investments in internet-connected devices to determine whether virtual home visits are a viable way of engaging families during the pandemic and beyond.

References


