research brief

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EXAMINING ATTENDANCE PATTERNS FOR SFUSD STUDENTS IN MISSION PROMISE NEIGHBORHOOD SCHOOLS: 2013-14 THROUGH 2016-17

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The Mission Promise Neighborhood (MPN) in San Francisco offers coordinated supports and services to help children and families connected to the Mission neighborhood achieve health, education, and economic goals. MPN supports children and families through a network of community organizations led by the Mission Economic Development Agency (MEDA). This brief focuses on outcomes for children at the four Mission Promise Neighborhood focus schools: Bryant Elementary School, Caesar Chavez Elementary School, Everett Middle School, and John O'Connell High School. At these schools, MPN resources provide family success coaches, mental health counselors, and academic support programs. They also support other school site staff. Implementation of MPN supports varies by school, as principals engage partners and services to meet the particular needs of children and families at each school.[1] Instead of offering a particular program or service for a subgroup of students, MPN schools offer all students a coordinated network of integrated supports in alignment with four interrelated goals: (1) families are supported to engage with schools, (2) students are connected to schools and communities, (3) students come to school ready to learn, and (4) students achieve academically. Student attendance is a key indicator of whether students and families are connected to and effectively engaged with schools. As an outcome, student attendance influences access to learning opportunities and, consequently, academic achievement.

The Mission Economic Development Agency, the community lead for the MPN zone, and San Francisco Unified School District (SFUSD) partnered with the John W. Gardner Center for Youth and Their Communities at Stanford University (Gardner Center) to investigate outcomes for students in MPN schools. In 2018, Gardner Center researchers conducted an analysis of attendance among students at MPN schools responding to the following research question:

> To what extent have rates of school attendance among students who attended MPN schools differed over time from those of similar students at other SFUSD schools?

Research Design

We analyzed SFUSD administrative data for the years of full implementation for MPN schools; specifically, academic years 2013-14, 2014-15, 2015-16, and 2016-17.[2] First, we used descriptive statistics to examine student demographics and school-level academic trends. We

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[1] For an expanded analysis of MPN implementation at the four focus schools, see Sipes & Ruiz de Velasco (2017).

[2] Full implementation means that each school had, at a minimum, a MPN-funded full-time community school coordinator and a family success coach for the duration of the school year.

analyzed MPN schoolwide attendance[3] trends by school level using all other Title I schools[4] in SFUSD as a comparison. Limiting our analysis to Title I schools creates a comparison group of schools that are socioeconomically similar to MPN schools. MPN schools had between 59% and 96% low-income students during the years studied (see Appendix A for details on the sample of schools included in the analysis).

For the main analysis, we developed a set of multivariable linear regression models that examined student attendance from 2013-14 through 2016-17. Using individual student attendance rates as the dependent variable, the models compared student attendance at MPN schools to attendance at all other Title I schools in SFUSD during each year of full MPN implementation. Other predictors in the model included prior year school attendance[5], prior year suspensions, gender, ethnicity, parent educational attainment, English proficiency, and special education status.

Key Findings[6]

I. The Mission Promise Neighborhood Schools Student Population

- Between 2013-14 and 2016-17, MPN schools served 3,240 unique students.[7]

- Compared to other SFUSD Title I schools, the composition of the MPN schools' population is more Latino (66% vs. 30%) and less Asian (8% vs. 40%).

- MPN schools also serve higher proportions of students who are English Learners (58% vs. 53%) and participate in Special Education (18% vs. 11%), compared to other SFUSD Title I schools.

- John O'Connell High School experienced a decline in enrollment during MPN implementation, losing more than a third of its students between 2013-14 and 2015-16 (from 456 to 293 students). Enrollment rates began to recover in 2016-17 (see Appendix B3).[8]

II. Attendance Patterns in Mission Promise Neighborhood Schools

Attendance rates generally declined from 2013-14 to 2016-17 across all of SFUSD Title I schools.[9] This pattern holds at the elementary, middle, and high school levels, and for MPN schools

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[3] Attendance is defined as the number of days attended divided by the number of days enrolled, at the school in question, across the school year.

[4] Per the federal Elementary and Secondary Education Act, the Title I program provides additional financial assistance to schools that serve large numbers of low-income students (at least 40 percent of the school population). Title I schools receive additional funding to support students to meet challenging state academic achievement standards. MPN schools are Title I schools, but are excluded from the comparison group.

[5] Prior year data includes SFUSD administrative data from the 2012-13 school year.

[6] All analyses use SFUSD administrative data for 2012-13 through 2016-17. Students must be enrolled in a school for 30 days or more to be included in the demographic analysis.

[7] Enrollment in the four MPN schools from 2013-14 through 2016-17 represents 4% of SFUSD enrollment and 5% of Title I enrollment.

[8] Districtwide enrollment reported to the CDE increased between 2013-14 and 2016-17, although fewer schools (and students) were included in the Title I category, as seen in Appendices A and B.

[9] Students are counted once towards each group of schools they are enrolled in for at least thirty days (MPN schools, or non-MPN SFUSD Title I schools) per the CDE attendance calculation and cumulative

specifically. Consistent with prior research, average attendance rates are higher in elementary and middle school than in high school. The MPN schools have lower average attendance rates than other SFUSD Title I schools, and this difference is most pronounced at the high school level. (See Appendix B for tables presenting aggregate attendance rates.)

- During MPN implementation, average attendance at Bryant and Chavez Elementary schools went from 95.5% in 2013-14 to 94.2% in 2016-17. Average attendance at all other SFUSD Title I elementary schools was slightly higher, at 96.1% in 2013-14 and, similarly, fell about one percentage point to 95.2% in 2016-17.

- Average attendance at the middle school level followed a similar small downward trend. Everett Middle School had slightly lower average attendance than other SFUSD Title I middle schools, with rates declining from 97.1% in 2013-14 to 95.7% in 2016-17. SFUSD Title I middle schools had a high average attendance of 98% in 2013-14, falling to 96.6% in 2016-17.

- Average attendance at John O'Connell High School dropped to 90.8% in 2016-17, from a high of 94.1% in 2014-15. In contrast, average attendance at all other SFUSD Title I high schools fell from a high of 96.6% in 2014-15, to a low of 94.2% in 2016-17.

The trends in attendance reported here may be more related to changes in school enrollment, student characteristics, or demographics than the successes or challenges of MPN implementation. In the next section, we report additional statistical analyses that attempt to control for these demographic and enrollment characteristics.

III. The Relationship between Enrollment in MPN Schools and Student Attendance

As described above, important demographic differences exist between the student populations at MPN schools and all other SFUSD Title I schools, including higher proportions of English Learners and students in Special Education, differences in racial demographics, and enrollment shifts within the high school. Because differences in student demographics at the school level are not accounted for in average schoolwide attendance rates, and because aggregated data do not capture other student-level characteristics that influence attendance, it is difficult to draw conclusions about school performance from this type of data. Instead, these analyses provide helpful context about average attendance rates during the years of MPN implementation, among MPN schools and at each school level, and offer a baseline point of comparison in Title I schools. We conducted additional statistical analysis, presented below, to investigate the relationship between MPN and patterns in student attendance, controlling for a range of student characteristics. (See Appendix C for tables presenting regression results.)

To understand the connection between MPN and student attendance, we developed a set of linear regression models. These models create a predicted attendance rate for each child based on their demographic characteristics, previous school attendance rate, and academic traits (using the rates of all students in SFUSD Title I schools as a baseline). We estimated whether attending an MPN school was associated with a higher or lower attendance rate than the predicted value, for each school year of full MPN implementation.

enrollment rules. The Title I school comparison group does not include the four MPN schools. For the purposes of this analysis the MPN schools are considered the "treatment" group.

Based on statistical analyses that control for a range of student characteristics[10], we find that:

- There was a statistically significant, positive association between enrollment in an MPN school and student attendance rates for school years 2013-14 and 2014-15.

  - In 2013-14, compared to the expected attendance rates for students with similar characteristics in SFUSD Title I schools, students at MPN schools had slightly higher than predicted attendance: ~.71 percentage points (p<.001), or one and a third school days per child per year. Aggregated across the 1,636 students at MPN schools in 2013-14, this .71 percentage point increase translates to about 2,090 additional days of school attended each year for all MPN students combined.

    - When we limited the 2013-14 model to only students who had been chronically absent in the prior year, the average increase in attendance for MPN students was slightly larger: ~1.7 percentage points (p<.05), or just over three days of school per child (assuming a 180-day school year).

  - In 2014-15, compared to the expected attendance rates for students with similar characteristics in SFUSD Title I schools, students at MPN schools had slightly higher than predicted attendance: ~.37 percentage points (p<.01), or two-thirds of a school day per child per year. Aggregated across the 1,583 students at MPN schools in 2014-15, this .37 percentage point increase translates to about 1,050 additional days of school attended each year for all MPN students combined.

    - In 2014-15, there was no statistically significant effect of MPN when we limited the model to only students who had been chronically absent in the prior year.

- There was no statistically significant effect of MPN on individual student attendance rates in school years 2015-16 and 2016-17.

These results suggest a positive association between being at an MPN school and student attendance during the first two years of full MPN implementation. In 2013-14 and 2014-15, we found that students at MPN schools attended at rates better than predicted given their demographic characteristics and the typical attendance of other similar students in SFUSD Title I schools. In 2013-14, the positive association between MPN participation and student attendance was greater for students who had been chronically absent in the prior year.

Discussion

This research presents a systematic analysis of the association between enrollment in an MPN school and student attendance. A scan of the literature for studies that examined student attendance changes in the context of similar interventions (e.g., focusing on family/community

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[10] The regression analysis included the following student characteristics as control variables: number of days enrolled, prior year attendance, grade span, gender, ethnicity, English proficiency, special education status, home language, parent education, and whether a student was suspended in the prior year. The model also included a school-level control for the percent of students eligible for free and reduced priced lunch, as student-level socioeconomic status was not available. See Appendix C for full regression results.

engagement or whole child interventions in school) suggests that the size of the differences we observed are consistent with those in other studies (Epstein & Sheldon, 2002; Leos-Urbel & Sanchez, 2015; Sheldon, 2010). While these findings are promising, it is important to acknowledge the limitations in our analytical approach. Because MPN was a school-wide intervention, our analyses broadly estimate how attendance for students in MPN schools differs from those in non-MPN schools. However, we cannot differentiate between the influence of MPN activities as opposed to other characteristics of the four MPN schools (e.g., school leadership, policies, or practices that are not unique to MPN) that might explain some or all of the differences in attendance.

As a community initiative, MPN aims to respond to the particular context of children and families in the neighborhood. The Mission neighborhood is known for cultural diversity and civic engagement. However, families also face challenges of high income inequality, accelerating costs of living, housing instability, and poverty. Stressors such as frequent moves, transportation barriers, or a lack of access to basic physical and mental health services can impact children at school. In response, MPN developed a two-generational model that supports families while meeting the social-emotional and educational needs of children. This model includes school-based resources and interventions to support student attendance, which may serve as mechanisms for the positive association observed in this study.

During the Gardner Center's 2016 qualitative study of MPN implementation, school staff identified several connections between MPN supports and positive trends in attendance (Sipes & Ruiz de Velasco, 2017). Qualitative data collected during the 2015-16 school year reflects interventions offered between 2013-14 and 2015-16, and cannot account for any changes in MPN implementation during the 2016-17 school year.

School staff mentioned positive behavioral intervention supports, trauma-informed care, restorative justice, and increased coherence between classroom expectations and support programs as contributing to increased student engagement and higher attendance. Teachers specifically reported that MPN partners have built strong connections with families that support student engagement. Similarly, teachers shared that MPN-supported school staff, including family success coaches, community school coordinators, and family liaisons, were able to intervene quickly when students experienced attendance challenges. In one example, staff made early morning calls to parents about attendance as well as about positive student behaviors that teachers often did not have the capacity to make themselves. Teachers believed these efforts increased student engagement and attendance. Finally, O'Connell High School staff emphasized the role of MPN student success coaches embedded in classrooms. Alongside teachers, these coaches developed meaningful relationships with students and identified and responded to individual challenges.

Across our 2016 qualitative study, school and partner staff reported that MPN supports helped meet student and family needs outside of school, improved the coherence and responsiveness of in-school programs and services, and offered more opportunities for students and families to develop meaningful relationships with school staff (Sipes & Ruiz de Velasco, 2017). These qualitative findings offer evidence of MPN's contribution to student attendance and engagement from the perspective of school staff. Further investigation into the statistical relationship between

school strategies to improve attendance and student outcomes would inform efforts to strengthen and extend positive attendance trends into future years and across all SFUSD Title I schools.

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APPENDIX A: TABLES OF FREE AND REDUCED PRICE LUNCH ELIGIBILITY RATES

Exhibit A1: MPN Schools: Percent of Students Eligible for Free and Reduced Price Lunch

School year	Bryant ES	Chavez ES	Everett MS	O'Connell HS
2013-2014	95.8 %	94.4 %	72.1 %	78.0 %
2014-2015	89.5 %	93.4 %	69.3 %	78.1 %
2015-2016	78.2 %	81.1 %	59.3 %	63.6 %
2016-2017	94.4 %	82.5 %	59.5 %	61.6 %

Source: CDE Unduplicated Student Poverty Data Files 2013-14 through 2016-17.[11]

Exhibit A2: SFUSD Title I Schools: Average Percent of Students Eligible for Free and Reduced Price Lunch

School year	Average Schoolwide FRPL Eligibility at Title I Schools[12]	Number of Title I Schools
2013-2014	73.2 %	92
2014-2015	72.5 %	96
2015-2016	70.0 %	86
2016-2017	69.7 %	83

Source: Gardner Center analysis of CDE Unduplicated Student Poverty Data Files 2013-14 through 2016-17.

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[11] School level data files available at: https://www.cde.ca.gov/ds/sd/sd/filessp.asp

[12] This percentage reflects an average of schoolwide rates, not weighted by the number of students enrolled. MPN schools are included in the overall Title I school averages.

APPENDIX B: TABLES OF AGGREGATE ATTENDANCE RATES

Exhibit B1: Elementary School Average Attendance

School year	MPN Schools	Total Students (MPN)	SFUSD Title I Schools	Total Students (Title I)
2013-2014	95.51 %	722	96.10 %	17990
2014-2015	95.28 %	675	95.70 %	19623
2015-2016	95.21 %	593	95.61 %	14951
2016-2017	94.17 %	555	95.20 %	13713

Source: Gardner Center Analysis of 2013-14 through 2016-17 SFUSD Administrative Data.
MPN Elementary Schools: Bryant Elementary School and Caesar Chavez Elementary School.

Exhibit B2: Middle School Average Attendance

School year	MPN School	Total Students (MPN)	SFUSD Title I Schools	Total Students (Title I)
2013-2014	97.06 %	425	98.04 %	9686
2014-2015	96.63 %	467	97.43 %	10106
2015-2016	95.95 %	532	97.14 %	8354
2016-2017	95.69 %	637	96.56 %	7171

Source: Gardner Center Analysis of 2013-14 through 2016-17 SFUSD Administrative Data.
MPN Middle School: Everett Middle School.

Exhibit B3: High School Average Attendance

School year	MPN School	Total Students (MPN)	SFUSD Title I Schools	Total Students (Title I)
2013-2014	92.71 %	456	96.15 %	14187
2014-2015	94.08 %	397	96.57 %	14799
2015-2016	94.00 %	293	95.24 %	11701
2016-2017	90.82 %	358	94.24 %	11601

Source: Gardner Center Analysis of 2013-14 through 2016-17 SFUSD Administrative Data.
MPN High School: John O'Connell High School.

APPENDIX C: TABLES OF REGRESSION COEFFIECIENTS

Exhibit C1: Predictors of Student Attendance Rates during MPN Implementation by School Year

F(29, 38019) = 275.93			F(29, 38019) = 247.26	
Prob > F = 0.0000			Prob > F = 0.0000	
R-squared = 0.4188			R-squared = 0.3060	
Root MSE = 4.8107			Root MSE = 5.1698	

	School year 2013-14		School year 2014-15	
Variable	β	(SE)	β	(SE)
Intercept	33.6114	(1.9239)	44.3597	1.9798
MPN	**0.7133***	**(0.1631)**	**0.3735****	**0.1400**
Days Enrolled	0.0445***	(0.0044)	0.0422***	0.0044
Prior Year Attendance	0.5807***	(0.0200)	0.4681***	0.0189
Free and Reduced Priced Lunch (School Level)	-1.2843***	(0.1606)	-1.6439***	0.1736
Suspended in the Prior Year	-1.1778**	(0.4056)	-1.5524**	0.4702
Grade Span (reference group: K-2)				
3-5	-0.2592**	(0.0762)	-0.1298	0.0760
6-8	0.3682***	(0.0915)	0.3409***	0.0945
9-11	-1.2969***	(0.1030)	-0.2928**	0.1039
12-13	-2.1366***	(0.1351)	-0.8190***	0.1396
Gender: Female	-0.0109	(0.0486)	-0.0755	0.0513
Ethnicity (reference group: White)				
African American	-0.4186**	(0.1581)	-0.6335***	0.1670
Hispanic/Latino	-0.0835	(0.1378)	-0.3206*	0.1533
Pacific Islander	-0.7431*	(0.3278)	-0.4556	0.2845
Asian	0.7117***	(0.1012)	1.0000***	0.1059
Multi-racial	0.1797	(0.1633)	0.2747	0.1558
Other	0.3021	(0.1736)	0.4279*	0.1850
Parent Education: College Graduate or Above	0.2477***	(0.0695)	0.2591**	0.0765
Home Language (reference group: English)				
Chinese	0.5029***	(0.0801)	0.3932***	0.0849
Spanish	0.1589	(0.1245)	0.1864	0.1435
Vietnamese	0.4208**	(0.1294)	0.2569	0.1527
Other	0.1981	(0.1441)	-0.1460	0.1460
Filipino Tagalog	-0.7078**	(0.2305)	-0.4946**	0.1612
English Proficiency (reference group: Fluent/Native speaker)				
Reclassified English Proficient	0.1242	(0.0785)	0.5360***	0.0827
English Learner	-0.2656**	(0.0959)	0.2284*	0.1019
Special Education Student	-0.3315**	(0.1135)	-0.7786***	0.1179
N	38,049		40,736	

Source: Gardner Center Analysis of 2012-13 through 2016-17 SFUSD Administrative Data.
School-level FRPL participation was obtained from the California Department of Education, Data Quest (http://dq.cde.ca.gov/dataquest).
Note: *** p<.001, ** p<.01, * p<.05

Exhibit C2: Predictors of Student Attendance Rates during MPN Implementation: School Year 2013-14, students with below 90% attendance in the prior year (2012-13)

F(29, 38019)	=	13.24
Prob > F	=	0.0000
R-squared	=	0.2316
Root MSE	=	11.917

	School year 2013-14 Below 90% Attendance in 2012-13	
Variable	β	(SE)
Intercept	49.6959	(3.7030)
MPN	**1.7053***	**(0.8301)**
Days Enrolled	0.0425***	(0.0091)
Prior Year Attendance	0.3771***	(0.0397)
Free and Reduced Priced Lunch (School Level)	-3.3878*	(1.4687)
Suspended in the Prior Year	0.5529	(1.0890)
Grade Span (reference group: K-2)		
3-5	-0.3401	(0.5820)
6-8	1.5891*	(0.7150)
9-11	-5.7204***	(0.7583)
12-13	-5.1431***	(1.1042)
Gender: Female	0.5187	(0.4616)
Ethnicity (reference group: White)		
African American	1.3823	(1.1164)
Hispanic/Latino	2.7352*	(1.1123)
Pacific Islander	1.5971	(1.4860)
Asian	1.2090	(1.4769)
Multi-racial	2.3824	(1.2791)
Other	-0.1482	(1.7076)
Parent Education: College graduate or above	2.7455*	(1.1684)
Home Language (reference group: English)		
Chinese	0.3733	(2.1907)
Spanish	0.9086	(0.8055)
Vietnamese	5.9970*	(2.7191)
Other	3.4559*	(1.5311)
Filipino Tagalog	-1.7747	(2.9603)
English Proficiency (reference group: Fluent/Native speaker)		
Reclassified English Proficient	-1.2343	(1.1664)
English Learner	-1.7260*	(0.7883)
Special Education Student	-0.3886	(0.5858)
N	2,815	

Source: Gardner Center Analysis of 2012-13 through 2016-17 SFUSD Administrative Data.

School-level FRPL participation was obtained from the California Department of Education, Data Quest (http://dq.cde.ca.gov/dataquest).

Note: *** $p<.001$, ** $p<.01$, * $p<.05$

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