

Reducing student absenteeism in the early grades by targeting parental beliefs

Supplemental Analyses

July 23, 2019

A) Average treatment effect by level of pre-treatment absences

Supplemental analyses show a significant difference in average (pooled) treatment effect by tercile of pre-treatment absences, defined as the total number of absences prior to the first mailing round (11/16/2015). The marginal effect of treatment is significantly greater for students who had missed at least one day of school prior to the first mailing round than for students who had zero absences prior to the first mailing round. There is no significant difference in the effect of treatment for students in the middle tercile of pre-treatment absences (those who had 1-2 absences prior to the first mailing round) compared to students in the highest tercile of pre-treatment absences (those who had 3-37 absences prior to the first mailing round)

Table A1. Marginal effects of treatment on absences, by tercile of pre-treatment absences

	N	# pre-treat absences	Marginal effect of pooled treatment [SE]
Bottom tercile	3,847	0 days	-0.18 [0.14]
Middle tercile	4,051	1-2 days	-0.70 [0.14]
Highest tercile	2,606	3-37 days	-0.81 [0.17]

Notes: OLS estimates. Dependent variable is total number of post-treatment absences, defined as the sum of all absences accrued after the first mailing (11/16/2015). Treatment reflects pooled treatment assignment. Covariates detailed in main paper text.

In line with the results presented in Table A1, when limiting the sample to only those students who had missed at least two days of school prior to the first mailing round ($N = 4,200$), we find a directional, but non-significant, difference in average (pooled) treatment effect by median of pre-treatment absences.

Table A2. Marginal effects of treatment on absences, by median of students who had two or more pre-treatment absences

	N	# pre-treat absences	Marginal effect of pooled treatment [SE]
Below median	2,552	2-3 days	-0.72 [0.22]
Above median	1,648	4-37 days	-0.88 [0.27]

Notes: OLS estimates. Dependent variable is total number of post-treatment absences, defined as the sum of all absences accrued after the first mailing (11/16/2015). Covariates detailed in main paper text.

B) Average treatment effect by mailing round

In supplemental analyses, we find an average per-round treatment effect of approximately -0.05 to -0.14 days, where the outcome of interest is the total number of absences between each mailing round.

Table B1. Average per-round treatment effect

	Weeks between rounds	Effect of pooled treatment [SE]
Round 1 to 2	8	-0.134 [0.044]
Round 2 to 3	4	-0.092 [0.026]
Round 3 to 4	7	-0.169 [0.035]
Round 4 to 5	2.5	-0.047 [0.018]
Round 5 to end of year	5	-0.093 [0.027]

Notes: OLS estimates. Dependent variable is defined as the total number of absences between each mailing round. Covariates detailed in main paper text.

Given the varying length of time between each round, we also examine the average treatment effect in the three weeks immediately following each mailing round to allow comparability across rounds and across studies. We find average effects of -0.05 to -0.09 days in the three weeks after each mailing round. All estimates are significantly different than zero, but do not differ significantly from each other.

Table B2. Average treatment effect in the three weeks after each mailing round

	Date received	Effect of pooled treatment [SE]
Round 1 + 3 weeks	11/16/2015	-0.056 [0.021]
Round 2 + 3 weeks	2/2/2016	-0.064 [0.022]
Round 3 + 3 weeks	3/1/2016	-0.094 [0.024]
Round 4 + 3 weeks	4/25/2016	-0.047 [0.018]
Round 5 + 3 weeks	5/11/2016	-0.073 [0.021]

Notes: OLS estimates. Dependent variable is defined as the total number of absences in the three calendar weeks after each mailing round. Covariates detailed in main paper text.

In addition, we evaluate average per round treatment effects for only the subgroup of students who had missed at least two days of school prior to the first mailing round ($N = 4,200$).

Table B3. Average per-round treatment effect for students who had two or more pre-treatment absences

	Weeks between rounds	Effect of pooled treatment [SE]
Round 1 to 2	8	-0.183 [0.082]
Round 2 to 3	4	-0.166 [0.048]
Round 3 to 4	7	-0.274 [0.066]
Round 4 to 5	2.5	-0.038 [0.033]
Round 5 to end of year	5	-0.091 [0.049]

Notes: OLS estimates. Dependent variable is defined as the total number of absences between each mailing round. Covariates detailed in main paper text.

Table B4. Average treatment effect in the three weeks after each mailing round for students who had two or more pre-treatment absences

	Date received	Effect of pooled treatment [SE]
Round 1 + 3 weeks	11/16/2015	-0.073 [0.038]
Round 2 + 3 weeks	2/2/2016	-0.126 [0.041]
Round 3 + 3 weeks	3/1/2016	-0.164 [0.044]
Round 4 + 3 weeks	4/25/2016	-0.038 [0.033]
Round 5 + 3 weeks	5/11/2016	-0.072 [0.038]

Notes: OLS estimates. Dependent variable is defined as the total number of absences in the three calendar weeks after each mailing round. Covariates detailed in main paper text.