

Supplement

How are the Children? A Study of the Effectiveness of a Social-emotional Learning Curriculum for High School Students

A REPORT OF A RANDOMIZED EXPERIMENT CONDUCTED IN
THE ROCK ISLAND MILAN SCHOOL DISTRICT

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EMPOWERING EDUCATORS THROUGH EVIDENCE AND INSIGHT

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Section 1: Attrition and baseline equivalence for DESSA

TABLE S1A. ATTRITION CALCULATION FOR DESSA SCORES FOR STUDENTS WITH A STUDENT-RATED OR TEACHER-RATED POSTTEST

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	25	1				0.038	
	Students	387			9	303	378		0.198
Control	Teachers	27	27	0				0.000	
	Students	405			0	329	405		0.188
Total	Teachers	53	52	1				0.019	
	Students	792			9	632	783		0.193
Differential attrition	Teachers							0.038	
	Students								0.011

TABLE S1B. BASELINE EQUIVALENCE FOR THE SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	301.07	60.75	227	27	0.10	0.339	4%
	HATC	307.60	68.13	181	25			

TABLE S1C. BASELINE EQUIVALENCE FOR THE SAMPLE WITH A REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE WHO ALSO HAVE A STUDENT OR TEACHER-RATED POSTTEST

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	298.45	58.92	200	25	0.20	0.063	8%
	HATC	311.50	69.70	153	22			

TABLE S1D. ADDITIONAL BASELINE EQUIVALENCE INFORMATION FOR SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE AND A STUDENT OR TEACHER-RATED POSTTEST (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (with dummy variable imputed pretest)	329	298.45	-0.04	303	311.50	-0.14
Subsample of individuals with non-missing values for outcome and baseline measures	200	298.45	0.02	153	311.50	0.01
Subsample of individuals with non-missing outcome measure and missing baseline measure	129	Not applicable	-0.12	150	Not applicable	-0.29

Subsample of individuals with non-missing baseline measures and missing outcome measure	27	320.48	Not applicable	28	286.25	Not applicable
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Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): 0.40

ANALYSIS OF STUDENTS WITH SELF-RATED DESSA POSTTEST (N=501)

TABLE S1E. ATTRITION CALCULATION FOR DESSA SCORES FOR STUDENTS WITH SELF-RATED POSTTEST SCORE

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	25	1				0.038	
	Students	387			9	241	378		0.362
Control	Teachers	27	26	1				0.037	
	Students	405			6	260	399		0.348
Total	Teachers	53	51	2				0.038	
	Students	792			15	501	777		0.355
Differential attrition	Teachers							0.001	
	Students								0.014

TABLE S1F. BASELINE EQUIVALENCE FOR THE SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA MEASURE

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	301.07	60.75	227	27	0.10	0.339	4%
	HATC	307.60	68.13	181	25			

TABLE S1G. BASELINE EQUIVALENCE FOR THE SAMPLE WITH A REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE WHO ALSO HAVE AN UNIMPUTED STUDENT-RATED POSTTEST

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	300.85	58.65	165	25	0.17	0.161	7%
	HATC	311.53	69.57	129	20			

TABLE S1H. ADDITIONAL BASELINE EQUIVALENCE INFORMATION FOR SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE AND AN UNIMPUTED STUDENT-RATED POSTTEST (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (with dummy variable imputed pretest)	260	300.85	298.07	241	311.53	308.17
Subsample of individuals with non-missing values for outcome and baseline measures	165	300.85	297.85	129	311.53	312.39
Subsample of individuals with non-missing outcome measure and missing baseline measure	95	Not applicable	298.45	112	Not applicable	303.30

Subsample of individuals with non-missing baseline measures and missing outcome measure	62	301.65	Not applicable	52	297.85	Not applicable
Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): ____0.50____						

ANALYSIS OF STUDENTS WITH TEACHER-RATED DESSA POSTTEST (N=616)

TABLE S1I. ATTRITION CALCULATION FOR DESSA SCORES FOR STUDENTS WITH TEACHER-RATED POSTTEST SCORE

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	25	1				0.038	
	Students	387			9	297	378		0.214
Control	Teachers	27	26	1				0.037	
	Students	405			18	319	387		0.176
Total	Teachers	53	51	2				0.038	
	Students	792			27	616	765		0.195
Differential attrition	Teachers							0.001	
	Students								0.039

TABLE S1J. BASELINE EQUIVALENCE FOR THE SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA MEASURE

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	301.07	60.75	227	27	0.10	0.339	4%
	HATC	307.60	68.13	181	25			

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TABLE S1K. BASELINE EQUIVALENCE FOR THE SAMPLE WITH A REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE AND AN UNIMPUTED TEACHER-RATED POSTTEST

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	298.64	58.99	191	24	0.20	0.068	8%
	HATC	311.72	70.14	151	22			

TABLE S1L. ADDITIONAL BASELINE EQUIVALENCE INFORMATION FOR SAMPLE WITH REAL (UNIMPUTED) STUDENT-RATED BASELINE DESSA SCORE AND AN UNIMPUTED TEACHER-RATED POSTTEST (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (with dummy variable imputed pretest)	319	298.64	22.98	297	311.72	21.69
Subsample of individuals with non-missing values for outcome and baseline measures	191	298.64	23.71	151	311.72	22.87
Subsample of individuals with non-missing outcome measure and missing baseline measure	128	Not applicable	21.89	146	Not applicable	20.47
Subsample of individuals with non-missing baseline measures and missing outcome measure	36	313.94	Not applicable	30	286.87	Not applicable
Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): ____0.18____						

SECTION 2: THE FULL RESULT OF THE BENCHMARK IMPACT MODEL FOR DESSA

The covariates in the model covariate-adjusted regression model are as follows (they also apply to subsequent regression results for all other outcomes):

Variable	Definition	Coding
istx	Indicator of whether a class is assigned to (HATC) treatment or control	Istx=0 if class is in treatment Istx=1 if class is in control
ssrpreSEC_rawscore_n	SSR-DESSA pretest Scores	
missingpre	Indicator of missing pretest	1 = missing; 0 = not missing
Schoolid (classification variable)	School: Rock Island High School or Thurgood Marshall High school	Schoolid=1 Schoolid=2
Grade (classification variable)	Student current Grade	grade=09 grade=10 grade=11 grade=12
position_s0_r (classification variable)	Primary Position: General education teacher Special education teacher EL teacher or missing, Other or Missing	Position_s0_r=MS Position_s0_r=Special Education Teacher Position_s0_r= teacher_general_ELL_oth
yrs_ft_ed_S0	Total number of years as an educator:	Open response
tchGender_S0	Teacher Gender	1 = male, 0 =female
lvl_exper_SEL_S0 (classification variable)	Level of experience teaching SEL	4 = A lot of experience; 3 = Moderate experience; 2 = minimal experience; 1 = no experience
prev_pd_SEL_S0	SEL PD	1 = Yes, 0 = No

SEL_belief_AVG_S0	SEL beliefs scale (composite)	5 = Strongly agree; 4 = agree; 3 = neutral; 2 = disagree; 1 = strongly disagree
ismale	Student Being male	1= male; 0 = others
ethnicity_n	Student ethnicity	0 = Not Hispanic or Latine, 1 = Hispanic or Latine
islep_n	Has an EL teacher for advisory	0=NO, 1=YES
isfeewaiver_n	Student Fee Waiver	0 =no fee waiver, 1=yes fee waiver
isspeced_n	Student Special Education	0= no special education, 1=Special Education
isdisability_n	Student Disability	1=YES, the student has an identified disability; 0=NO, the student does not have an identified disability. "Disabilities" include anything that the district has identified (e.g., mental, emotional, physical, learning). We are interested only in whether the student has been designated with a disability, not the type of disability.
MSstuvar	Missing student covariate information (islep, isfeewaver, isspeced, isdisability)	1 = missing; 0 = not missing

MODEL 2A. ANALYSIS RESTRICTED TO STUDENTS WITH DESSA POSTTESTS (N=632)

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	posttest
Covariance Structure	Variance Components

Model Information	
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	632
Number of Observations Used	632
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	0.1121	0.04118	2.72	0.0032
Residual		0.6135	0.03648	16.82	<.0001

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept				-1.2571	0.7476	42	-1.68	0.1001
istx				-0.1716	0.1223	42	-1.40	0.1678
ssrpreSEC_rawscore_n				0.004869	0.000682	568	7.14	<.0001
missingpre				1.2648	0.2207	568	5.73	<.0001

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
schoolid			1	0.1400	0.2275	42	0.62	0.5415
schoolid			2	0	.	.	.	.
grade	09			-0.07078	0.1675	37	-0.42	0.6751
grade	10			0.2241	0.1697	37	1.32	0.1948
grade	11			0.2317	0.1649	37	1.41	0.1683
grade	12			0	.	.	.	.
position_s0_r		MS		0.2906	0.6828	42	0.43	0.6726
position_s0_r		Special education teach		-0.1283	0.3311	42	-0.39	0.7003
position_s0_r		teacher_general_ELL_oth		0	.	.	.	.
yrs_ft_ed_S0				0.003455	0.006888	42	0.50	0.6186
tchGender_S0				0.2097	0.1454	42	1.44	0.1565
lvl_exper_SEL_S0				-0.1982	0.09353	42	-2.12	0.0401
prev_pd_SEL_S0				-0.08401	0.1277	42	-0.66	0.5142
SEL_belief_AVG_S0				0.03221	0.1680	42	0.19	0.8489
ismale				-0.2039	0.06533	568	-3.12	0.0019
ethnicity_n				-0.05729	0.08788	568	-0.65	0.5147
islep_n				0.2896	0.1826	568	1.59	0.1133
isfeewaiver_n				-0.03664	0.06681	568	-0.55	0.5836
isspeced_n				-0.08832	0.3517	568	-0.25	0.8018
isdisability_n				0.08296	0.1809	568	0.46	0.6467
MSstuar				0.08410	0.3472	568	0.24	0.8087

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	42	1.97	0.1678
ssrpreSEC_rawscore_n	1	568	51.03	<.0001
missingpre	1	568	32.83	<.0001
schoolid	1	42	0.38	0.5415
grade	3	37	2.39	0.0846
position_s0_r	2	42	0.29	0.7531
yrs_ft_ed_S0	1	42	0.25	0.6186
tchGender_S0	1	42	2.08	0.1565
lvl_exper_SEL_S0	1	42	4.49	0.0401
prev_pd_SEL_S0	1	42	0.43	0.5142
SEL_belief_AVG_S0	1	42	0.04	0.8489
ismale	1	568	9.74	0.0019
ethnicity_n	1	568	0.42	0.5147
islep_n	1	568	2.52	0.1133
isfeewaiver_n	1	568	0.30	0.5836
isspeced_n	1	568	0.06	0.8018
isdisability_n	1	568	0.21	0.6467
MSstubar	1	568	0.06	0.8087

MODEL 2B. ANALYSIS RESTRICTED TO STUDENTS WITH SELF-RATED POSTTESTS (N=501)

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	ssrpostSEC_rawscore
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	501
Number of Observations Used	501
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	0	.	.	.
Residual		3451.17	223.00	15.48	<.0001

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept				200.90	38.6109	41	5.20	<.0001
istx				3.9933	5.7655	41	0.69	0.4925
ssrpreSEC_rawscore_n				0.5182	0.05523	438	9.38	<.0001
missingpre				155.02	17.8795	438	8.67	<.0001
schoolid			1	-11.3214	14.4452	41	-0.78	0.4377
schoolid			2	0	.	.	.	.
grade	09			-22.8559	10.4664	26	-2.18	0.0382
grade	10			-25.1532	10.4834	26	-2.40	0.0239
grade	11			-12.0178	10.7297	26	-1.12	0.2729
grade	12			0	.	.	.	.
position_s0_r		MS		-0.6338	51.4875	41	-0.01	0.9902
position_s0_r		Special education teach		-31.4808	26.4725	41	-1.19	0.2412
position_s0_r		teacher_general_ELL_oth		0	.	.	.	.
yrs_ft_ed_S0				0.1824	0.3230	41	0.56	0.5752
tchGender_S0				5.9599	7.1511	41	0.83	0.4094
lvl_exper_SEL_S0				-5.1395	4.5691	41	-1.12	0.2672
prev_pd_SEL_S0				-5.6095	6.2735	41	-0.89	0.3765
SEL_belief_AVG_S0				-5.6892	7.5508	41	-0.75	0.4555
ismale				-8.3182	5.3795	438	-1.55	0.1228
ethnicity_n				6.3476	7.5892	438	0.84	0.4034
islep_n				8.4973	9.3198	438	0.91	0.3624

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
isfeewaiver_n				11.6924	5.5759	438	2.10	0.0366
isspeced_n				-0.5314	31.0886	438	-0.02	0.9864
isdisability_n				19.9635	15.7960	438	1.26	0.2070
MSstuvr				19.2315	29.4718	438	0.65	0.5144

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	41	0.48	0.4925
ssrpreSEC_rawscore_n	1	438	88.05	<.0001
missingpre	1	438	75.17	<.0001
schoolid	1	41	0.61	0.4377
grade	3	26	2.52	0.0798
position_s0_r	2	41	0.93	0.4024
yrs_ft_ed_S0	1	41	0.32	0.5752
tchGender_S0	1	41	0.69	0.4094
lvl_exper_SEL_S0	1	41	1.27	0.2672
prev_pd_SEL_S0	1	41	0.80	0.3765
SEL_belief_AVG_S0	1	41	0.57	0.4555
ismale	1	438	2.39	0.1228
ethnicity_n	1	438	0.70	0.4034
islep_n	1	438	0.83	0.3624

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
isfeewaiver_n	1	438	4.40	0.0366
isspeced_n	1	438	0.00	0.9864
isdisability_n	1	438	1.60	0.2070
MSStuvar	1	438	0.43	0.5144

MODEL 2C. ANALYSIS RESTRICTED TO STUDENTS WITH TEACHER-RATED POSTTESTS (N=616)

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	hseminipostSEC_rawscore
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	616
Number of Observations Used	616
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	9.7127	3.1550	3.08	0.0010
Residual		40.2285	2.4154	16.66	<.0001

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept				20.6992	6.6581	41	3.11	0.0034
istx				-2.0215	1.1064	41	-1.83	0.0750
ssrpreSEC_rawscore_n				0.01209	0.005597	553	2.16	0.0312
missingpre				2.0140	1.8147	553	1.11	0.2676
schoolid			1	2.3297	2.0273	41	1.15	0.2572
schoolid			2	0	.	.	.	.
grade	09			-3.5731	1.4480	33	-2.47	0.0190
grade	10			-2.8888	1.4809	33	-1.95	0.0596
grade	11			-0.7940	1.4465	33	-0.55	0.5868
grade	12			0	.	.	.	.
position_s0_r		MS		3.7459	5.9497	41	0.63	0.5324
position_s0_r		Special education teach		0.4997	3.0214	41	0.17	0.8694
position_s0_r		teacher_general_ELL_oth		0	.	.	.	.
yrs_ft_ed_S0				0.02210	0.06233	41	0.35	0.7247
tchGender_S0				1.8471	1.3100	41	1.41	0.1661
lvl_exper_SEL_S0				-1.5206	0.8339	41	-1.82	0.0755
prev_pd_SEL_S0				-0.6465	1.1539	41	-0.56	0.5783
SEL_belief_AVG_S0				0.9962	1.5090	41	0.66	0.5128
ismale				-1.4161	0.5379	553	-2.63	0.0087
ethnicity_n				-1.2757	0.7264	553	-1.76	0.0796
islep_n				3.0008	1.5599	553	1.92	0.0549

Solution for Fixed Effects								
Effect	grade	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
isfeewaiver_n				-0.9755	0.5496	553	-1.78	0.0764
isspeced_n				-2.5976	3.1479	553	-0.83	0.4096
isdisability_n				0.7741	1.4674	553	0.53	0.5980
MSstuvr				-1.0323	3.3382	553	-0.31	0.7572

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	41	3.34	0.0750
ssrpreSEC_rawscore_n	1	553	4.67	0.0312
missingpre	1	553	1.23	0.2676
schoolid	1	41	1.32	0.2572
grade	3	33	2.88	0.0508
position_s0_r	2	41	0.21	0.8144
yrs_ft_ed_S0	1	41	0.13	0.7247
tchGender_S0	1	41	1.99	0.1661
lvl_exper_SEL_S0	1	41	3.33	0.0755
prev_pd_SEL_S0	1	41	0.31	0.5783
SEL_belief_AVG_S0	1	41	0.44	0.5128
ismale	1	553	6.93	0.0087
ethnicity_n	1	553	3.08	0.0796
islep_n	1	553	3.70	0.0549

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
isfeewaiver_n	1	553	3.15	0.0764
isspeced_n	1	553	0.68	0.4096
isdisability_n	1	553	0.28	0.5980
MSstovar	1	553	0.10	0.7572

SECTION 3: SUMMARY TABLE FOR SEVEN MODELS PROGRESSIVELY INCLUDED ADDITIONAL COVARIATES

MODEL 2A. ANALYSIS RESTRICTED TO STUDENTS WITH DESSA POSTTESTS (N=632)

Label	Model 1 (N=632)	Model 2 (N=632)	Model 3 (N=632)	Model 4 (N=632)	Model 5 (N=632)	Model 6 (N=353)	Model 7 (N=353)
N obs							
	FIXED EFFECTS						
Intercept	-0.09(0.09,P=0.336)	-0.43(0.19,P=0.025)	-0.55(0.25,P=0.029)	-1.88(0.31,P=<.001)	-1.26(0.75,P=0.100)	-1.71(0.32,P=<.001)	-1.69(0.76,P=0.032)
Treatment	-0.09(0.13,P=0.482)	-0.07(0.12,P=0.561)	-0.10(0.13,P=0.437)	-0.11(0.12,P=0.391)	-0.17(0.12,P=0.168)	-0.11(0.14,P=0.425)	-0.19(0.13,P=0.156)
Pretest				0.00(0.00,P=<.001)	0.00(0.00,P=<.001)		
MS Pretest				1.27(0.22,P=<.001)	1.26(0.22,P=<.001)		
Rock Island High School		0.39(0.19,P=0.042)	0.44(0.20,P=0.031)	0.38(0.18,P=0.044)	0.14(0.23,P=0.542)	0.14(0.20,P=0.510)	-0.01(0.24,P=0.955)
Thurgood Marshall High School		0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
Grade 9			-0.11(0.17,P=0.518)	-0.10(0.16,P=0.525)	-0.07(0.17,P=0.675)	0.04(0.20,P=0.858)	0.10(0.20,P=0.633)
Grade 10			0.20(0.17,P=0.261)	0.22(0.16,P=0.183)	0.22(0.17,P=0.195)	0.11(0.21,P=0.607)	0.14(0.20,P=0.499)
Grade 11			0.28(0.17,P=0.111)	0.22(0.16,P=0.178)	0.23(0.16,P=0.168)	0.07(0.20,P=0.714)	0.06(0.19,P=0.757)
Grade 12			0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
MS Position					0.29(0.68,P=0.673)		
Special education teachers					-0.13(0.33,P=0.700)		
General ELL or Other teachers					0.00(.,P=.)		
Experience as teacher					0.00(0.01,P=0.619)		0.00(0.01,P=0.538)
Teacher Gender					0.21(0.15,P=0.156)		0.23(0.15,P=0.134)
Level of experience teaching soc					-0.20(0.09,P=0.040)		-0.18(0.10,P=0.088)
Professional learning on SEL					-0.08(0.13,P=0.514)		0.02(0.13,P=0.883)
Average SEL belief					0.03(0.17,P=0.849)		0.13(0.17,P=0.443)
Gender					-0.20(0.07,P=0.002)		-0.24(0.08,P=0.003)
Ethnicity					-0.06(0.09,P=0.515)		-0.03(0.11,P=0.790)

Being LEP					0.29(0.18,P=0.113)		0.33(0.21,P=0.122)
SES status					-0.04(0.07,P=0.584)		0.04(0.08,P=0.649)
Spe ed					-0.09(0.35,P=0.802)		-0.02(0.52,P=0.976)
Disability					0.08(0.18,P=0.647)		-0.15(0.23,P=0.505)
MS stu var					0.08(0.35,P=0.809)		-0.07(0.40,P=0.856)
RANDOM EFFECTS							
Teacher	0.14(<.001)	0.13(<.001)	0.15(<.001)	0.13(<.001)	0.11(0.003)	0.11(0.004)	0.07(0.030)
Residual	0.69(<.001)	0.69(<.001)	0.67(<.001)	0.62(<.001)	0.61(<.001)	0.52(<.001)	0.52(<.001)

MODEL 2B. ANALYSIS RESTRICTED TO STUDENTS WITH SELF-RATED POSTTESTS (N=501)

Label	Model 1 (N=501)	Model 2 (N=501)	Model 3 (N=501)	Model 4 (N=501)	Model 5 (N=501)	Model 6 (N=294)	Model 7 (N=294)
N obs							
FIXED EFFECTS							
Intercept	298.07(4.01,P=<.001)	290.32(13.33,P=<.001)	313.29(16.31,P=<.001)	159.57(21.99,P=<.001)	200.90(38.61,P=<.001)	162.46(24.50,P=<.001)	166.04(48.87,P=0.002)
Treatment	10.09(5.78,P=0.087)	10.22(5.78,P=0.084)	7.54(5.86,P=0.205)	4.73(5.44,P=0.388)	3.99(5.77,P=0.492)	5.03(7.53,P=0.508)	4.78(8.27,P=0.567)
Pretest				0.53(0.05,P=<.001)	0.52(0.06,P=<.001)	0.53(0.05,P=<.001)	0.53(0.06,P=<.001)
MS Pretest				157.61(17.58,P=<.001)	155.02(17.88,P=<.001)		
Rock Island High School		8.10(13.27,P=0.545)	7.25(13.22,P=0.586)	-1.82(12.21,P=0.882)	-11.32(14.45,P=0.438)	-5.32(14.06,P=0.707)	-5.49(17.28,P=0.752)
Thurgood Marshall High School		0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
Grade 9			-26.00(10.56,P=0.021)	-21.37(9.71,P=0.037)	-22.86(10.47,P=0.038)	-21.61(13.79,P=0.138)	-21.27(14.50,P=0.163)
Grade 10			-29.06(10.55,P=0.011)	-23.06(9.72,P=0.025)	-25.15(10.48,P=0.024)	-23.33(13.56,P=0.106)	-24.35(14.76,P=0.120)
Grade 11			-12.93(10.72,P=0.239)	-9.19(9.91,P=0.363)	-12.02(10.73,P=0.273)	-8.78(13.57,P=0.527)	-12.12(15.15,P=0.436)
Grade 12			0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
MS Position					-0.63(51.49,P=0.990)		
Special education teachers					-31.48(26.47,P=0.241)		
General ELL or Other teachers					0.00(.,P=.)		
Experience as teacher					0.18(0.32,P=0.575)		0.35(0.39,P=0.376)
Teacher Gender					5.96(7.15,P=0.409)		6.06(9.20,P=0.515)
Level of experience teaching soc					-5.14(4.57,P=0.267)		-5.29(6.77,P=0.439)
Professional learning on SEL					-5.61(6.27,P=0.376)		-4.44(7.93,P=0.579)
Average SEL belief					-5.69(7.55,P=0.455)		1.96(10.17,P=0.848)
Gender					-8.32(5.38,P=0.123)		-16.27(7.14,P=0.024)
Ethnicity					6.35(7.59,P=0.403)		1.49(10.40,P=0.886)
Being LEP					8.50(9.32,P=0.362)		0.66(12.14,P=0.956)
SES status					11.69(5.58,P=0.037)		9.07(7.35,P=0.218)

Spe ed					-0.53(31.09,P=0.986)		0.00(.,P=.)
Disability					19.96(15.80,P=0.207)		5.83(23.35,P=0.803)
MS stu var					19.23(29.47,P=0.514)		20.85(42.71,P=0.626)
	RANDOM EFFECTS						
Teacher	0.00(.)	0.00(.)	0.00(.)	0.00(.)	0.00(.)	0.00(.)	0.00(.)
Residual	4172.66(<.001)	4177.91(<.001)	4115.15(<.001)	3471.66(<.001)	3451.17(<.001)	3450.89(<.001)	3504.73(<.001)

MODEL 2C. ANALYSIS RESTRICTED TO STUDENTS WITH TEACHER-RATED POSTTESTS (N=616)

Label	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
N obs	(N=616)	(N=616)	(N=616)	(N=616)	(N=616)	(N=342)	(N=342)
FIXED EFFECTS							
Intercept	22.60(0.83,P=<.001)	18.87(1.68,P=<.001)	21.48(2.04,P=<.001)	18.74(2.60,P=<.001)	20.70(6.66,P=0.003)	20.19(2.97,P=<.001)	20.33(7.85,P=0.014)
Treatment	-1.14(1.19,P=0.345)	-0.97(1.14,P=0.399)	-1.50(1.12,P=0.187)	-1.39(1.10,P=0.212)	-2.02(1.11,P=0.075)	-1.31(1.42,P=0.363)	-2.27(1.39,P=0.112)
Pretest				0.01(0.01,P=0.029)	0.01(0.01,P=0.031)	0.01(0.01,P=0.024)	0.01(0.01,P=0.027)
MS Pretest				2.02(1.81,P=0.265)	2.01(1.81,P=0.268)		
Rock Island High School		4.22(1.67,P=0.015)	4.10(1.65,P=0.017)	4.00(1.61,P=0.017)	2.33(2.03,P=0.257)	1.89(1.98,P=0.345)	0.25(2.41,P=0.917)
Thurgood Marshall High School		0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
Grade 9			-3.93(1.42,P=0.009)	-4.03(1.39,P=0.007)	-3.57(1.45,P=0.019)	-2.30(1.91,P=0.244)	-1.89(1.90,P=0.333)
Grade 10			-3.07(1.43,P=0.039)	-3.18(1.40,P=0.030)	-2.89(1.48,P=0.060)	-3.69(1.97,P=0.077)	-3.47(1.98,P=0.097)
Grade 11			-0.61(1.44,P=0.674)	-1.02(1.42,P=0.477)	-0.79(1.45,P=0.587)	-2.26(1.89,P=0.246)	-2.23(1.84,P=0.241)
Grade 12			0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
MS Position					3.75(5.95,P=0.532)		
Special education teachers					0.50(3.02,P=0.869)		
General ELL or Other teachers					0.00(.,P=.)		
Experience as teacher					0.02(0.06,P=0.725)		-0.02(0.07,P=0.828)
Teacher Gender					1.85(1.31,P=0.166)		2.41(1.57,P=0.133)
Level of experience teaching soc					-1.52(0.83,P=0.076)		-1.30(1.07,P=0.232)
Professional learning on SEL					-0.65(1.15,P=0.578)		0.69(1.37,P=0.617)
Average SEL belief					1.00(1.51,P=0.513)		1.15(1.86,P=0.541)
Gender					-1.42(0.54,P=0.009)		-1.60(0.68,P=0.019)
Ethnicity					-1.28(0.73,P=0.080)		-0.88(0.93,P=0.344)
Being LEP					3.00(1.56,P=0.055)		4.84(2.17,P=0.027)
SES status					-0.98(0.55,P=0.076)		-0.18(0.68,P=0.787)

Speed					-2.60(3.15,P=0.410)		-2.88(4.31,P=0.505)
Disability					0.77(1.47,P=0.598)		0.12(1.83,P=0.948)
MS stu var					-1.03(3.34,P=0.757)		-2.34(3.83,P=0.542)
	RANDOM EFFECTS						
Teacher	13.73(<.001)	12.10(<.001)	11.46(<.001)	10.69(<.001)	9.71(0.001)	14.58(<.001)	11.62(0.004)
Residual	42.05(<.001)	42.01(<.001)	41.49(<.001)	40.96(<.001)	40.23(<.001)	33.80(<.001)	33.67(<.001)

SECTION 4: ATTRITION AND BASELINE EQUIVALENCE FOR STUDENT ABSENCES FROM SCHOOL

TABLE S4A. ATTRITION CALCULATION FOR STUDENT ABSENCES

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	26	0				0.000	
	Students	387			0	377	387		0.026
Control	Teachers	27	27	0				0.000	
	Students	405			0	391	405		0.035
Total	Teachers	53	53	0				0.000	
	Students	792			0	768	792		0.030
Differential attrition	Teachers							0.000	
	Students								-0.009

TABLE S4B. BASELINE EQUIVALENCE FOR THE STUDY SAMPLE BASED ON ROSTERS RECEIVED (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	12.74	13.29	387	26	0.02	0.840	1%
	HATC	12.97	14.00	352	24			

TABLE S4C. BASELINE EQUIVALENCE FOR THE SAMPLE WITH AN UNIMPUTED BASELINE ATTENDANCE MEASURE WHO ALSO HAVE POST INTERVENTION ATTENDANCE (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	12.42	12.89	374	26	0.02	0.851	1%
	HATC	12.64	13.71	344	24			

TABLE S4D. ADDITIONAL BASELINE EQUIVALENCE INFORMATION FOR SAMPLES WITH UNIMPUTED BASELINE ATTENDANCE MEASURE WHO ALSO HAVE UNIMPUTED POST-INTERVENTION ATTENDANCE (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (with dummy variable imputed pretest)	391	12.42	16.73	377	12.64	19.26
Subsample of individuals with non-missing values for outcome and baseline measures	374	12.42	15.46	344	12.64	16.38

Subsample of individuals with non-missing outcome measure and missing baseline measure	17	Not applicable	44.60	33	Not applicable	49.18
Subsample of individuals with non-missing baseline measures and missing outcome measure	0		Not applicable	0		Not applicable

Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): ____0.75____

SECTION 5: FULL RESULT OF IMPACT MODEL

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	postabsent
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	768
Number of Observations Used	768
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	12.3900	7.4155	1.67	0.0474
Residual		140.01	7.7128	18.15	<.0001

Solution for Fixed Effects									
Effect	grade_n	position_s0_r	race_n	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept					16.9957	16.3665	43	1.04	0.3049
istx					1.6108	1.3887	43	1.16	0.2525
ripreabsent_n					0.9065	0.03660	696	24.77	<.0001
missingpre					19.6081	4.3375	696	4.52	<.0001
schoolid				1	-25.4339	4.3488	43	-5.85	<.0001
schoolid				2	0	.	.	.	.
grade_n	08				11.3275	13.2220	70	0.86	0.3945
grade_n	09				3.9996	12.8676	70	0.31	0.7569
grade_n	10				3.2746	12.8556	70	0.25	0.7997
grade_n	11				3.2092	12.8111	70	0.25	0.8029
grade_n	12				3.1876	12.7569	70	0.25	0.8034
grade_n	MS				0	.	.	.	.
position_s0_r		MS			7.9206	8.0508	43	0.98	0.3307
position_s0_r		Special education teach			-3.7731	4.2392	43	-0.89	0.3784
position_s0_r		teacher_general_ELL_oth			0	.	.	.	.
race_n			A		2.8977	1.9872	110	1.46	0.1476

Solution for Fixed Effects									
Effect	grade_n	position_s0_r	race_n	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
race_n			B		2.1592	1.1644	110	1.85	0.0664
race_n			M		-0.5805	1.5280	110	-0.38	0.7047
race_n			MS		0	.	.	.	.
race_n			W		0	.	.	.	.
yrs_ft_ed_S0					0.08179	0.07814	43	1.05	0.3011
tchGender_S0					-2.1647	1.6582	43	-1.31	0.1987
lvl_exper_SEL_S0					1.1267	1.0854	43	1.04	0.3051
prev_pd_SEL_S0					0.2241	1.4566	43	0.15	0.8785
SEL_belief_AVG_S0					0.04695	1.9724	43	0.02	0.9811
ismale					1.0698	0.8952	696	1.20	0.2325
ethnicity_n					0.03114	1.2884	696	0.02	0.9807
islep_n					0.8146	2.4013	696	0.34	0.7345
isfeewaiver_n					0.9698	0.9418	696	1.03	0.3035
isspeced_n					8.6905	4.6723	696	1.86	0.0633
isdisability_n					-4.4035	2.4825	696	-1.77	0.0765
MSstubar					-8.2444	5.1176	696	-1.61	0.1076
ssrpreSEC_rawscore_n					0.004134	0.009540	696	0.43	0.6649
MSscorepre					5.3730	3.0606	696	1.76	0.0796

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	43	1.35	0.2525
ripreabsent_n	1	696	613.59	<.0001
missingpre	1	696	20.44	<.0001
schoolid	1	43	34.21	<.0001
grade_n	4	70	1.45	0.2269
position_s0_r	2	43	1.37	0.2646
race_n	3	110	1.71	0.1700
yrs_ft_ed_S0	1	43	1.10	0.3011
tchGender_S0	1	43	1.70	0.1987
lvl_exper_SEL_S0	1	43	1.08	0.3051
prev_pd_SEL_S0	1	43	0.02	0.8785
SEL_belief_AVG_S0	1	43	0.00	0.9811
ismale	1	696	1.43	0.2325
ethnicity_n	1	696	0.00	0.9807
islep_n	1	696	0.12	0.7345
isfeewaiver_n	1	696	1.06	0.3035
isspeced_n	1	696	3.46	0.0633
isdisability_n	1	696	3.15	0.0765
MSstubar	1	696	2.60	0.1076
ssrpreSEC_rawscore_n	1	696	0.19	0.6649
MSscorepre	1	696	3.08	0.0796

SECTION 6: SUMMARY TABLE FOR SEVEN MODELS ABOUT SCHOOL ABSENCES

Label	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
N obs	(N=768)	(N=768)	(N=768)	(N=768)	(N=768)	(N=718)	(N=718)
	FXED EFFECTS						
Intercept	19.42(2.94,P=<.001)	54.56(2.43,P=<.001)	48.67(16.98,P=0.006)	21.96(13.98,P=0.123)	17.00(16.37,P=0.305)	24.88(4.32,P=<.001)	15.87(7.39,P=0.038)
Treatment	4.03(4.20,P=0.342)	1.48(1.22,P=0.231)	2.32(1.73,P=0.186)	1.71(1.25,P=0.177)	1.61(1.39,P=0.253)	0.61(0.93,P=0.516)	0.13(0.90,P=0.888)
Pretest				0.90(0.04,P=<.001)	0.91(0.04,P=<.001)	0.93(0.03,P=<.001)	0.93(0.03,P=<.001)
MS Pretest				17.56(3.81,P=<.001)	19.61(4.34,P=<.001)		
Rock Island High School		-40.09(2.41,P=<.001)		-29.63(3.68,P=<.001)	-25.43(4.35,P=<.001)	-21.78(4.00,P=<.001)	-18.10(4.33,P=<.001)
Thurgood Marshall High School		0.00(.,P=.)		0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
Grade 8			26.56(17.22,P=0.128)	20.51(13.09,P=0.122)	11.33(13.22,P=0.395)	9.02(3.10,P=0.005)	7.33(3.19,P=0.025)
Grade 9			10.06(16.76,P=0.550)	11.03(12.77,P=0.391)	4.00(12.87,P=0.757)	-0.02(1.55,P=0.990)	-0.70(1.54,P=0.655)
Grade 10			5.16(16.75,P=0.759)	11.14(12.75,P=0.385)	3.27(12.86,P=0.800)	0.58(1.56,P=0.714)	-0.24(1.54,P=0.878)
Grade 11			3.29(16.74,P=0.845)	10.66(12.75,P=0.406)	3.21(12.81,P=0.803)	0.90(1.52,P=0.558)	0.24(1.50,P=0.873)
Grade 12			1.64(16.75,P=0.922)	9.40(12.71,P=0.462)	3.19(12.76,P=0.803)	0.00(.,P=.)	0.00(.,P=.)
MS Grade			0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)		
MS					7.92(8.05,P=0.331)		
Special education teachers					-3.77(4.24,P=0.378)		
General ELL or Other teachers					0.00(.,P=.)		
Race A					2.90(1.99,P=0.148)		2.13(1.87,P=0.255)
Race B					2.16(1.16,P=0.066)		1.49(1.12,P=0.186)

Race M					-0.58(1.53,P=0.705)		0.36(1.47,P=0.808)
Race MS					0.00(.,P=.)		
Race W					0.00(.,P=.)		0.00(.,P=.)
Experience as teacher					0.08(0.08,P=0.301)		0.03(0.05,P=0.550)
Teacher Gender					-2.16(1.66,P=0.199)		-1.22(1.12,P=0.282)
Level of experience teaching soc					1.13(1.09,P=0.305)		1.56(0.71,P=0.034)
Professional learning on SEL					0.22(1.46,P=0.878)		0.59(0.95,P=0.540)
Average SEL belief					0.05(1.97,P=0.981)		-0.75(1.23,P=0.545)
Gender					1.07(0.90,P=0.232)		2.03(0.85,P=0.017)
Ethnicity					0.03(1.29,P=0.981)		-0.74(1.22,P=0.547)
Being LEP					0.81(2.40,P=0.735)		2.24(1.65,P=0.174)
SES status					0.97(0.94,P=0.303)		0.90(0.90,P=0.316)
Spe ed					8.69(4.67,P=0.063)		9.61(4.92,P=0.051)
Disability					-4.40(2.48,P=0.077)		-4.15(2.31,P=0.073)
MS stu var					-8.24(5.12,P=0.108)		-3.47(8.03,P=0.666)
Pre Score					0.00(0.01,P=0.665)		0.01(0.01,P=0.553)
MS Pre Score					5.37(3.06,P=0.080)		4.56(2.99,P=0.127)
RANDOM EFFECTS							
Teacher	209.48(<.001)	0.00(.)	18.74(0.081)	9.13(0.052)	12.39(0.047)	1.31(0.275)	0.00(.)
Residual	281.84(<.001)	286.02(<.001)	265.44(<.001)	145.56(<.001)	140.01(<.001)	128.24(<.001)	125.09(<.001)

SECTION 7: ATTRITION AND BASELINE EQUIVALENCE FOR REFERRALS OUTCOME

TABLE S7A: ATTRITION TABLE FOR REFERRAL

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	26	0				0.000	
	Students	387			0	377	387		0.026
Control	Teachers	27	27	0				0.000	
	Students	405			0	391	405		0.035
Total	Teachers	53	53	0				0.000	
	Students	792			0	768	792		0.030
Differential attrition	Teachers							0.000	
	Students								-0.009

TABLE S7B. BASELINE EQUIVALENCE FOR THE STUDY SAMPLE BASED ON ROSTERS RECEIVED (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	0.31	0.82	387	26	-0.04	0.821	-2%
	HATC	0.23	0.69	352	24			

TABLE S7C. BASELINE EQUIVALENCE FOR THE SAMPLE WITH A UNIMPUTED REFERRAL MEASURE WHO ALSO HAVE POST INTERVENTION REFERRAL (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	0.30	0.82	374	26	-0.04	0.849	-1%
	HATC	0.23	0.69	344	24			

TABLE S7D BASELINE EQUIVALENCE FOR THE SAMPLE WITH REAL (UNIMPUTED) BASELINE REFERRAL VALUE FOR INDIVIDUALS WHO ALSO HAVE POST-INTERVENTION REFERRAL INFORMATION (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (including students with dummy variable imputed attendance baseline)	391	0.30	0.41	377	0.23	0.42
Subsample of individuals with non-missing values for outcome and baseline measures	374	0.30	0.41	344	0.23	0.43
Subsample of individuals with non-missing outcome measure and missing baseline measure	17	Not applicable	0.45	33	Not applicable	0.30

Subsample of individuals with non-missing baseline measures and missing outcome measure	13	0.56	Not applicable	8	0.26	Not applicable
Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): 0.47						

SECTION 8: FULL RESULT OF IMPACT MODEL OF REFERRALS

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	postSDR
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	768
Number of Observations Used	768
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	0	.	.	.

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Residual		1.2496	0.06501	19.22	<.0001

Solution for Fixed Effects									
Effect	grade_n	position_s0_r	race_n	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept					-2.0700	1.4142	43	-1.46	0.1505
istx					0.07294	0.08634	43	0.84	0.4029
ripreSDR_n					0.8703	0.06008	696	14.48	<.0001
missingpre					1.7504	0.3963	696	4.42	<.0001
schoolid				1	1.6452	0.3689	43	4.46	<.0001
schoolid				2	0	.	.	.	.
grade_n	08				0.8351	1.2332	70	0.68	0.5005
grade_n	09				0.3016	1.2031	70	0.25	0.8028
grade_n	10				0.1163	1.2022	70	0.10	0.9232
grade_n	11				0.1568	1.2003	70	0.13	0.8965
grade_n	12				0.1697	1.1975	70	0.14	0.8877
grade_n	MS				0	.	.	.	.
position_s0_r		MS			-0.06736	0.6576	43	-0.10	0.9189
position_s0_r		Special education teach			-0.4948	0.3696	43	-1.34	0.1877
position_s0_r		teacher_general_ELL_oth			0	.	.	.	.
race_n			A		0.2139	0.1848	110	1.16	0.2497
race_n			B		0.3113	0.1086	110	2.87	0.0050

Solution for Fixed Effects									
Effect	grade_n	position_s0_r	race_n	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
race_n			M		0.1384	0.1425	110	0.97	0.3338
race_n			MS		0	.	.	.	.
race_n			W		0	.	.	.	.
yrs_ft_ed_S0					0.005089	0.004731	43	1.08	0.2882
tchGender_S0					-0.1777	0.1064	43	-1.67	0.1021
lvl_exper_SEL_S0					-0.00165	0.06885	43	-0.02	0.9810
prev_pd_SEL_S0					0.1255	0.09124	43	1.38	0.1762
SEL_belief_AVG_S0					-0.09026	0.1212	43	-0.74	0.4604
ismale					0.2104	0.08272	696	2.54	0.0112
ethnicity_n					-0.00686	0.1195	696	-0.06	0.9543
islep_n					0.2941	0.1615	696	1.82	0.0690
isfeewaiver_n					-0.1240	0.08801	696	-1.41	0.1592
isspeced_n					0.7147	0.4312	696	1.66	0.0978
isdisability_n					-0.09156	0.2298	696	-0.40	0.6905
MSstuvar					-1.3878	0.4723	696	-2.94	0.0034
ssrpreSEC_rawscore_n					0.001455	0.000891	696	1.63	0.1029
MSscorepre					0.5666	0.2841	696	1.99	0.0465

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	43	0.71	0.4029

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
ripreSDR_n	1	696	209.81	<.0001
missingpre	1	696	19.51	<.0001
schoolid	1	43	19.89	<.0001
grade_n	4	70	1.93	0.1158
position_s0_r	2	43	1.01	0.3726
race_n	3	110	2.75	0.0459
yrs_ft_ed_S0	1	43	1.16	0.2882
tchGender_S0	1	43	2.79	0.1021
lvl_exper_SEL_S0	1	43	0.00	0.9810
prev_pd_SEL_S0	1	43	1.89	0.1762
SEL_belief_AVG_S0	1	43	0.55	0.4604
ismale	1	696	6.47	0.0112
ethnicity_n	1	696	0.00	0.9543
islep_n	1	696	3.32	0.0690
isfeewaiver_n	1	696	1.99	0.1592
isspeced_n	1	696	2.75	0.0978
isdisability_n	1	696	0.16	0.6905
MSstuar	1	696	8.64	0.0034
ssrpreSEC_rawscore_n	1	696	2.67	0.1029
MSscorepre	1	696	3.98	0.0465

SECTION 9: SUMMARY TABLE FOR SEVEN MODELS ABOUT REFERRALS

Label	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
N obs	(N=768)	(N=768)	(N=768)	(N=768)	(N=768)	(N=718)	(N=718)
Intercept	0.41(0.08,P=<.001)	0.34(0.20,P=0.098)	-0.12(1.31,P=0.926)	-2.48(1.30,P=0.063)	-2.07(1.41,P=0.151)	-1.93(0.43,P=<.001)	-2.56(0.74,P=0.001)
Treatment	0.01(0.11,P=0.902)	0.02(0.11,P=0.884)	0.05(0.10,P=0.588)	0.08(0.08,P=0.330)	0.07(0.09,P=0.403)	0.11(0.09,P=0.213)	0.10(0.09,P=0.298)
Pretest				0.87(0.06,P=<.001)	0.87(0.06,P=<.001)	0.91(0.06,P=<.001)	0.90(0.06,P=<.001)
MS Pretest				1.24(0.34,P=<.001)	1.75(0.40,P=<.001)		
Rock Island High School		0.08(0.20,P=0.685)	0.06(0.19,P=0.761)	1.17(0.32,P=<.001)	1.65(0.37,P=<.001)	2.04(0.40,P=<.001)	2.28(0.44,P=<.001)
Thurgood Marshall High School		0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)
	FIXED EFFECTS						
Grade 8			1.22(1.33,P=0.363)	2.28(1.22,P=0.065)	0.84(1.23,P=0.501)	0.83(0.31,P=0.010)	0.59(0.32,P=0.073)
Grade 9			0.65(1.30,P=0.617)	1.61(1.19,P=0.181)	0.30(1.20,P=0.803)	0.19(0.15,P=0.219)	0.08(0.16,P=0.597)
Grade 10			0.50(1.30,P=0.703)	1.42(1.19,P=0.236)	0.12(1.20,P=0.923)	-0.04(0.15,P=0.782)	-0.11(0.16,P=0.482)
Grade 11			0.25(1.30,P=0.850)	1.37(1.19,P=0.253)	0.16(1.20,P=0.896)	-0.08(0.15,P=0.609)	-0.07(0.15,P=0.646)
Grade 12			0.26(1.30,P=0.844)	1.37(1.19,P=0.252)	0.17(1.20,P=0.888)	0.00(.,P=.)	0.00(.,P=.)
MS Grade			0.00(.,P=.)	0.00(.,P=.)	0.00(.,P=.)		
MS Position					-0.07(0.66,P=0.919)		
Special education teachers					-0.49(0.37,P=0.188)		
General ELL or Other teachers					0.00(.,P=.)		
Race A					0.21(0.18,P=0.250)		0.22(0.19,P=0.257)
Race B					0.31(0.11,P=0.005)		0.29(0.11,P=0.011)
Race M					0.14(0.14,P=0.334)		0.16(0.15,P=0.281)
Race MS					0.00(.,P=.)		
Race W					0.00(.,P=.)		0.00(.,P=.)
Experience as teacher					0.01(0.00,P=0.288)		0.01(0.00,P=0.206)

Teacher Gender					-0.18(0.11,P=0.102)		-0.23(0.11,P=0.052)
Level of experience teaching soc					-0.00(0.07,P=0.981)		0.01(0.07,P=0.865)
Professional learning on SEL					0.13(0.09,P=0.176)		0.14(0.10,P=0.158)
Average SEL belief					-0.09(0.12,P=0.460)		-0.11(0.12,P=0.394)
Gender					0.21(0.08,P=0.011)		0.23(0.09,P=0.007)
Ethnicity					-0.01(0.12,P=0.954)		0.01(0.12,P=0.905)
Being LEP					0.29(0.16,P=0.069)		0.33(0.17,P=0.052)
SES status					-0.12(0.09,P=0.159)		-0.12(0.09,P=0.184)
Spe ed					0.71(0.43,P=0.098)		1.10(0.50,P=0.027)
Disability					-0.09(0.23,P=0.690)		-0.05(0.23,P=0.833)
MS stu var					-1.39(0.47,P=0.003)		-1.56(0.82,P=0.057)
Pre Score					0.00(0.00,P=0.103)		0.00(0.00,P=0.071)
MS Pre Score					0.57(0.28,P=0.046)		0.63(0.30,P=0.037)
RANDOM EFFECTS							
Teacher	0.04(0.137)	0.04(0.129)	0.01(0.338)	0.00(0.485)	0.00(.)	0.00(0.434)	0.00(.)
Residual	1.67(<.001)	1.67(<.001)	1.67(<.001)	1.30(<.001)	1.25(<.001)	1.33(<.001)	1.29(<.001)

SECTION 10: FULL ATTRITION AND BASELINE EQUIVALENCE CALCULATION FOR READING ACHIEVEMENT

TABLE S10A: ATTRITION TABLE FOR READING ACHIEVEMENT

	Randomized*	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	21	5			0.192	
	Students	323			27	227		0.233
Control	Teachers	27	23	4			0.148	
	Students	353			21	265		0.202
Total	Teachers	53	46	0			0.044	
	Students	676			48	492		0.217
Differential attrition	Teachers						0.044	
	Students							.0313

*sample of students (676) is lower than for other outcomes (792) because 12th grade was excluded from analysis.

TABLE S10B. BASELINE EQUIVALENCE FOR THE STUDY SAMPLE BASED ON ROSTERS RECEIVED (TO SUPPORT WWC REVIEW))

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	215.53	15.21	278	24	-0.02	0.941	-1%
	HATC	214.45	16.87	250	21			

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TABLE S10C. BASELINE EQUIVALENCE FOR THE SAMPLE WITH AN UNIMPUTED PRETEST AND WHO ALSO HAVE AN UNIMPUTED POSTTEST (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	216.25	14.87	241	23	0.01	0.960	0%
	HATC	215.91	16.53	203	21			

TABLE S10D BASELINE EQUIVALENCE FOR THE SAMPLE WITH AN UNIMPUTED PRETEST VALUES FOR INDIVIDUALS WHO ALSO HAVE AN UNIMPUTED POSTTEST_(TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (includes students with dummy variable imputed pretest)	265	216.25	217.81	227	215.91	217.80
Subsample of individuals with non-missing values for outcome and baseline measures	241	216.25	217.66	203	217.20	217.20
Subsample of individuals with non-missing outcome measure and missing baseline measure	24	Not applicable	219.29	24	Not applicable	222.88
Subsample of individuals with non-missing baseline measures and missing outcome measure	37	210.84	Not applicable	47	208.17	Not applicable
Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): ____0.85____						

SECTION 11: IMPACT MODEL OF READING ACHIEVEMENT

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	reading_SP24
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	492
Number of Observations Used	492
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
.Intercept	teacherid	0	.	.	
Residual		83.8013	5.4724	15.31	<.0001

Solution for Fixed Effects								
Effect	grade_n	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept				23.9542	10.0391	34	2.39	0.0227
istx				1.1307	0.8938	34	1.27	0.2145
reading_FL23_n				0.8422	0.03465	435	24.31	<.0001
missingpre				185.36	7.6388	435	24.27	<.0001
schoolid			1	9.8132	2.5371	34	3.87	0.0005
schoolid			2	0	.	.	.	.
grade_n	09			1.5586	1.2325	22	1.26	0.2193
grade_n	10			0.4419	1.1446	22	0.39	0.7032
grade_n	11			0	.	.	.	.
position_s0_r		MS		-5.3902	7.1472	34	-0.75	0.4559
position_s0_r		Special education teach		1.1483	4.1452	34	0.28	0.7834
position_s0_r		teacher_general_ELL_oth		0	.	.	.	.
yrs_ft_ed_S0				-0.02905	0.05031	34	-0.58	0.5675
tchGender_S0				-0.1858	1.1537	34	-0.16	0.8730
lvl_exper_SEL_S0				-0.8187	0.7092	34	-1.15	0.2564
prev_pd_SEL_S0				0.7719	0.9989	34	0.77	0.4450
SEL_belief_AVG_S0				2.4134	1.1736	34	2.06	0.0475
ismale				0.4134	0.8520	435	0.49	0.6277
ethnicity_n				-0.6519	1.1357	435	-0.57	0.5663
islep_n				-6.8707	1.6397	435	-4.19	<.0001
isfeewaiver_n				-1.2062	0.8724	435	-1.38	0.1675

Solution for Fixed Effects								
Effect	grade_n	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
isspeced_n				-6.4642	4.6283	435	-1.40	0.1632
isdisability_n				4.3669	2.2507	435	1.94	0.0530
MSstuvr				1.5351	6.9591	435	0.22	0.8255
ssrpreSEC_rawscore_n				-0.01413	0.008890	435	-1.59	0.1127
MSscorepre				-5.1104	2.8219	435	-1.81	0.0708

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	34	1.60	0.2145
reading_FL23_n	1	435	590.91	<.0001
missingpre	1	435	588.82	<.0001
schoolid	1	34	14.96	0.0005
grade_n	2	22	0.89	0.4264
position_s0_r	2	34	0.63	0.5412
yrs_ft_ed_S0	1	34	0.33	0.5675
tchGender_S0	1	34	0.03	0.8730
lvl_exper_SEL_S0	1	34	1.33	0.2564
prev_pd_SEL_S0	1	34	0.60	0.4450
SEL_belief_AVG_S0	1	34	4.23	0.0475
ismale	1	435	0.24	0.6277
ethnicity_n	1	435	0.33	0.5663

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
islep_n	1	435	17.56	<.0001
isfeewaiver_n	1	435	1.91	0.1675
isspeced_n	1	435	1.95	0.1632
isdisability_n	1	435	3.76	0.0530
MSstovar	1	435	0.05	0.8255
ssrpreSEC_rawscore_n	1	435	2.53	0.1127
MSscorepre	1	435	3.28	0.0708

SECTION 12: FULL ATTRITION AND BASELINE EQUIVALENCE CALCULATION OF MATHEMATICS ACHIEVEMENT

TABLE S12A: ATTRITION TABLE FOR MATHEMETICS ACHIEVEMENT

		Randomized	Teachers for whom we can find at least one student they had at baseline with a posstest	Teachers for whom we cannot find any students they had at baseline with posttest	Number of students lost from baseline among teachers	Number of students with a posttest	N of students at baseline eligible for attrition calc	Rate of attrition teachers	Rate of attrition students
HATC	Teachers	26	21	5				0.192	
	Students	323			27	193	296		0.348
Control	Teachers	27	23	4				0.148	
	Students	353			21	253	332		0.238
Total	Teachers	53	46	0				0.044	
	Students	676			48	446	628		0.290
Differential attrition	Teachers							0.044	
	Students								0.110

*sample of students (676) is lower than for other outcomes (792) because 12th grade was excluded from analysis.

TABLE S12B. BASELINE EQUIVALENCE FOR THE STUDY SAMPLE BASED ON ROSTERS RECEIVED (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	221.73	19.35	293	24	0.04	0.858	2%

	HATC	220.43	22.37	251	22
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TABLE S12C. BASELINE EQUIVALENCE FOR THE SAMPLE WITH AN UNIMPUTED PRETEST AND WHO ALSO HAVE AN UNIMPUTED POSTTEST (TO SUPPORT WWC REVIEW)

	Condition	Means	Standard deviations	No. of students	No. of teachers	Effect size	p value	Percentile standing
Unadjusted effect size	Control	224.99	17.40	240	23	0.05	0.835	2%
	HATC	227.03	19.17	177	21			

TABLE S12D. BASELINE EQUIVALENCE FOR THE SAMPLE WITH REAL (UNIMPUTED) BASELINE “PRETEST” VALUES FOR INDIVIDUALS WHO ALSO HAVE A POSTTEST (TO SUPPORT WWC REVIEW)

Sample	Comparison group			Treatment group		
	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure	No. of Individuals	Mean of Baseline Measure	Mean of Outcome Measure
Analytic sample (includes students with dummy variable imputed pretest)	253	224.99	231.69	193	227.03	231.94
Subsample of individuals with non-missing values for outcome and baseline measures	240	224.99	232.33	177	227.03	232.74
Subsample of individuals with non-missing outcome measure and missing baseline measure	13	Not applicable	219.92	16	Not applicable	223.13
Subsample of individuals with non-missing baseline measures and missing outcome measure	53	206.98	Not applicable	74	204.65	Not applicable

Note. Correlation between the baseline and outcome measures (calculated using only non-imputed data): ____0.87____

SECTION 13: IMPACT MODEL OF MATHEMATICS ACHIEVEMENT

Model Information	
Data Set	IN.ANALYTICAL
Dependent Variable	math_SP24
Covariance Structure	Variance Components
Subject Effect	teacherid
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Between-Within

Number of Observations	
Number of Observations Read	446
Number of Observations Used	446
Number of Observations Not Used	0

Covariance Parameter Estimates					
Cov Parm	Subject	Estimate	Standard Error	Z Value	Pr > Z
Intercept	teacherid	2.9150	3.5621	0.82	0.2066
Residual		95.5657	6.8388	13.97	<.0001

Solution for Fixed Effects								
Effect	grade_n	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
Intercept				40.4605	10.2712	35	3.94	0.0004
istx				-1.0854	1.1628	35	-0.93	0.3570
math_FL23_n				0.7928	0.03194	388	24.82	<.0001
missingpre				171.88	7.3538	388	23.37	<.0001
schoolid			1	7.9566	2.8419	35	2.80	0.0083
schoolid			2	0	.	.	.	.
grade_n	09			1.7151	1.6419	15	1.04	0.3128
grade_n	10			2.9872	1.5258	15	1.96	0.0691
grade_n	11			0	.	.	.	.
position_s0_r		MS		12.7881	9.8225	35	1.30	0.2014
position_s0_r		Special education teach		9.3322	7.3614	35	1.27	0.2133
position_s0_r		teacher_general_ELL_oth		0	.	.	.	.
yrs_ft_ed_S0				-0.08538	0.07523	35	-1.13	0.2641
tchGender_S0				1.7418	1.5000	35	1.16	0.2534
lvl_exper_SEL_S0				-1.6731	0.9317	35	-1.80	0.0812
prev_pd_SEL_S0				-0.4974	1.3359	35	-0.37	0.7119
SEL_belief_AVG_S0				2.0327	1.6434	35	1.24	0.2244
ismale				1.2421	0.9622	388	1.29	0.1975
ethnicity_n				0.3483	1.2830	388	0.27	0.7861
islep_n				1.3284	3.0119	388	0.44	0.6594
isfeewaiver_n				-1.1638	0.9850	388	-1.18	0.2381

Solution for Fixed Effects								
Effect	grade_n	position_s0_r	schoolid	Estimate	Standard Error	DF	t Value	Pr > t
isspeced_n				-19.3901	7.6806	388	-2.52	0.0120
isdisability_n				1.3650	2.5708	388	0.53	0.5957
MSstubar				-16.2048	5.9625	388	-2.72	0.0069
ssrpreSEC_rawscore_n				0.01045	0.01099	388	0.95	0.3423
MSscorepre				1.5611	3.4647	388	0.45	0.6526

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
istx	1	35	0.87	0.3570
math_FL23_n	1	388	616.02	<.0001
missingpre	1	388	546.31	<.0001
schoolid	1	35	7.84	0.0083
grade_n	2	15	1.94	0.1779
position_s0_r	2	35	0.96	0.3933
yrs_ft_ed_S0	1	35	1.29	0.2641
tchGender_S0	1	35	1.35	0.2534
lvl_exper_SEL_S0	1	35	3.22	0.0812
prev_pd_SEL_S0	1	35	0.14	0.7119
SEL_belief_AVG_S0	1	35	1.53	0.2244
ismale	1	388	1.67	0.1975
ethnicity_n	1	388	0.07	0.7861

Type 3 Tests of Fixed Effects				
Effect	Num DF	Den DF	F Value	Pr > F
islep_n	1	388	0.19	0.6594
isfeewaiver_n	1	388	1.40	0.2381
isspeced_n	1	388	6.37	0.0120
isdisability_n	1	388	0.28	0.5957
MSstubar	1	388	7.39	0.0069
ssrpreSEC_rawscore_n	1	388	0.90	0.3423
MSscorepre	1	388	0.20	0.6526