

Empowering Adolescents to Transform Schools: Lessons from a Behavioral Targeting

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Motivation

- Children's social environment has a profound influence on their life chances and outcomes.
- In disadvantaged neighbourhoods many perils hinder their healthy social, emotional and cognitive development.
- Youth development can take a particularly dangerous form in these neighbourhoods, where social norms and behavioral conduct is starkly different from mainstream society.

Motivation

- Adolescence is time of exceptional vulnerability.
- Time for profound changes in the brain and intense emotional richness.
- Time to find self and social identity

Dangerous norms and behavioral codes can be fast internalized, lowering their chances to fulfil their potential very early on, trapping them in poverty and crime cycle.

Motivation

- Education is an obvious way out of poverty and criminal life.
- But, schools tend to mirror the neighbourhood they serve.
- They have high violence, exclusion, low achievement, offering very little in the way of escaping neighbourhood disadvantages.

It remains that schools are one of the most important social institutions to help break the poverty cycle and restore social mobility.

Literature

- CBT-type programs: Thinking Fast and Slow (Heller et al., 2017), Shukuma Program (Moving Mindsets) in South African schools (J-PAL Africa)
- Moving to Opportunity (Chetty et al., 2016)
- Adolescent Development (Blakemore and Mills, 2014)
- A school-based intervention using high social status students (Paluck et al., 2016)

Extensive Qualitative Work

Before even thinking about a program, we conducted an extensive qualitative work.

- Interviews with adolescents in schools flagged as “risk of criminal activity”
- Two main lessons:
 - Incredible, dark hopelessness. Acceptance of a bad future.
 - Even cognitively bright, intellectually able kids, no aspirations.
- No trust in adults. Refusal to be lectured by the likes of me:))

We have been dropped on a road with a dead end and told, “have a nice journey!”

Idea of an Intervention

- A question to senior students:
 - What if we ask your help to help the little ones in your school?
- Answer (almost unanimously): Well, that is no problem.

Idea:

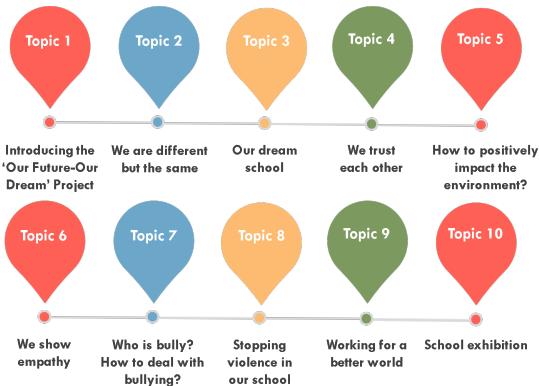
- Combining the insights we learned from self-persuasion and cognitive dissonance.
- Designing a behavioral (indirect) targeting of challenging adolescents.

Indirect Targeting of Challenging Adolescents

- An empowerment curriculum to be delivered by select senior students (student-teachers) to their junior schoolmates.
- **Conjecture (ToC):**
 - Trying to persuade a person to adopt a particular belief allows one's own mind to be persuaded (self-persuasion)
 - If the message used for persuasion creates a certain degree of discomfort in the persuaders mind due to the inconsistency between their behavior and the conveyed message, a resolution may transpire overtime (cognitive dissonance).

Persuader's behavior will align with their freshly embraced convictions.

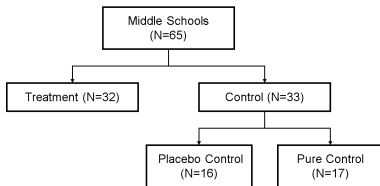
Project: Our Future-Our Dream



Evaluation design

- 65 middle schools in Diyarbakir Turkey, covering over 20,000 children
- Middle schools comprise of 4 grades: 5 and 6 (junior years), 7 and 8 (senior years)
- Diyarbakir is a Southeast city. Lots of disadvantaged inner-city neighbourhoods and villages.

Randomization:



◀ Placebo Activities

Intervention Delivery

After baseline:

- Select STUDENT-TEACHERS (from all 65 schools): Highest average score of
 - emotional intelligence test (Reading the Mind in the Eyes)
 - number of friendship nominations received
 - number of popularity nominations received
- Assign grade 7 student-teachers to grade 5 classes, grade 8 student-teachers to grade 6 classes
- Assign interns to each treatment and placebo schools (1 or 2)
- Use once a week well-being hours
- Student-teachers rehearse the material, deliver the material in their classes
- Write a progress report after each session

Intervention Delivery

Full academic year implementation:

- Attention to Details:
 - Rehearsing extensively, discussing the content of the day's session
 - Wearing the project t-shirt
 - Writing a progress report, giving us feedback (on how to improve the session)
- All for student-teachers to think hard about the content and embrace the messages and feel:
 - autonomous and powerful
 - valued and important
 - purposeful

Timeline of the Study



Student-Teachers conducting a session



Session Report Book (An example report)

Ötürüm Sonu Mentor Raporu

- Oturum başarılı mıydı?
 Tamamen Başarılıydı. Biraz Başarılıydı. Hiç Başarılı Değildi.

- Öğrenciler arasında konuya ilgi gösterenlerin yüzdesi aşağı yukarı kaçtı?
 90-95

- Sizin öneriler bizim için çok önemli. Bu oturumun materyallerinde değiştirmek istediğiniz şeyler varsa lütfen bize yazın. Başarılarınızla bizimle paylaşın. Bu rapora oturumla ilgili ilgili bir şeyi de yazabilirsiniz.

Bence öğretmenler çok başarılıydiler. Öğrencilerimiz de
 hakkında bildiklerimizi paylaştılar.
 Anı
 Bir sorunun en sevdiğim arkadaşımın sorusuna
 "Benim hoş arkadaşım gel" demeyecek
 arkadaşım.

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Dissemination Activities: Exhibition



Outcomes

Comprehensive set of outcomes to describe the school climate, perceptions and individual well-being:

- Social Outcomes (School Climate)
 - Administrative: Disciplinary flagging
 - An incentivized task: Measuring unfair/anti-social behavior and desire to punish unfairness (a third-party punishment game)
 - Social networks: Inter-grade support
 - Surveys: Perceived social environment (behavioral norms, perception of adults and teachers)
- Personal Improvement
 - Surveys: Socio-emotional well-being (locus of control, self-worth, impulsivity, sense of belonging, perspective taking, sense of responsibility toward world issues)
 - Achievement scores: (standardized math and Turkish tests implemented in class)

Empirical Specification

ANCOVA

$$y_{ics} = \alpha_0 + \alpha_1 T_s + X'_{ics}\beta + \delta_d + \varepsilon_{ics} \quad (1)$$

To tease out the interaction mechanism, we also estimate the following model:

$$y_{ics} = \alpha_0 + \alpha_1 T_s + \alpha_2 P_s + X'_{ics}\beta + \delta_d + \varepsilon_{ics} \quad (2)$$

where P_s is the binary indicator of placebo control.

▶ Baseline Balance

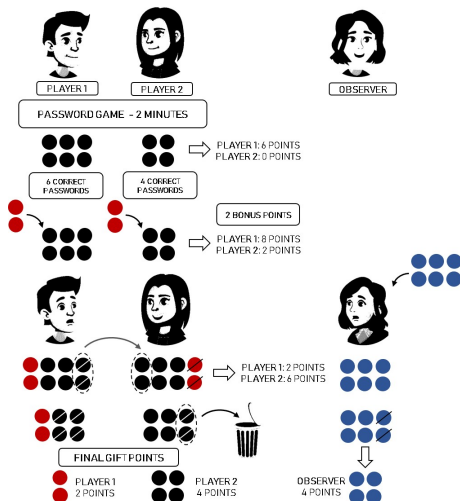
School Climate: Disciplinary Flagging

Panel 1: Student Teachers				
	Year 1		Year 2	
	Benchmark Model		Full Model	
	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging
Treatment	-0.06*** (0.02)	-0.04** (0.01)	-0.03** (0.01)	-0.04** (0.01)
Placebo		0.05** (0.02)		-0.01 (0.02)
Control Mean	0.08	0.04	0.06	0.05
p-value [TR = P]	.	0.00	.	0.19
Observations	990	990	1115	1115

Panel 2: Indegrees				
	Year 1		Year 2	
	Benchmark Model		Full Model	
	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging
Treatment	-0.03*** (0.01)	-0.02** (0.01)	-0.02*** (0.01)	-0.02** (0.01)
Placebo		0.01 (0.01)		0.02 (0.01)
Control Mean	0.04	0.04	0.05	0.03
p-value [TR = P]	.	0.02	.	0.02
Observations	4731	4731	5099	5099

▶ Full Sample

A Third Party Punishment Game



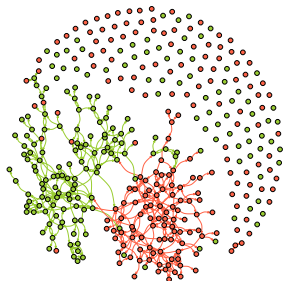
School Climate: Unfair Behavior and Desire for Justice

Panel 1: Student Teachers								
	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment
Treatment	-0.10 (0.06)	0.01 (0.11)	-0.07 (0.06)	0.04 (0.13)	-0.14*** (0.05)	0.61*** (0.13)	-0.18*** (0.06)	0.64*** (0.13)
Placebo			0.07 (0.07)	0.06 (0.18)			-0.07 (0.07)	0.06 (0.15)
Control Mean	1.14	2.06	1.12	2.11	1.09	1.63	1.12	1.66
p-value [TR = P]	.	.	0.07	0.89	.	.	0.10	0.00
Wild Bootstrap p-value	988	988	988	988	1012	1012	1012	1012

Panel 2: Indegrees								
	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment
Treatment	-0.02 (0.03)	0.12* (0.07)	-0.02 (0.04)	0.15* (0.08)	-0.25*** (0.04)	0.45*** (0.07)	-0.22*** (0.05)	0.51*** (0.07)
Placebo			0.01 (0.05)	0.07 (0.10)			0.05 (0.07)	0.16* (0.09)
Control Mean	1.10	1.80	1.11	1.80	1.14	1.61	1.11	1.59
p-value [TR = P]	.	.	0.46	0.37	.	.	0.00	0.00
Observations	4721	4720	4721	4720	4497	4496	4497	4496

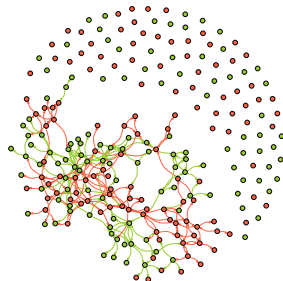
▶ Full Sample

School Climate: Support Networks



● Seniors
● Juniors

(A.) School A



● Seniors
● Juniors

(B.) School B

School Climate: Student-Teacher Network Ties

Panel 1: Juniors (Grades 5 and 6)				
	Benchmark Model		Full Model	
	Number of Student Teacher Nominations	Number of Links from Juniors	Number of Student Teacher Nominations	Number of Links from Juniors
Treatment	0.03*** (0.01)	0.16*** (0.04)	0.03*** (0.01)	0.18*** (0.04)
Placebo			-0.00 (0.01)	0.04 (0.04)
Control Mean	0.03	0.12	0.03	0.11
p-value [TR = P]	.	.	0.00	0.01
Wild BS p-value	0.00	0.00	0.00	0.00
Observations	8559	1807	8559	1807

Panel 2: Seniors (Grade 7 and 8)				
	Benchmark Model		Full Model	
	Number of Student Teacher Nominations	Number of Links from Seniors	Number of Student Teacher Nominations	Number of Links from Seniors
Treatment	0.03 (0.02)	0.03 (0.09)	0.06** (0.03)	0.09 (0.11)
Placebo			0.08** (0.03)	0.12 (0.13)
Control Mean	0.23	2.99	0.20	3.08
p-value [TR = P]	.	.	0.66	0.76
Wild BS p-value	0.28	0.71	0.07	0.48
Observations	15873	1807	15873	1807

School Climate: Behavioral Norms and Relationship with Adults

Panel 1: Student Teachers								
	Benchmark Model				Full Model			
	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior
Treatment	0.12*** (0.05)	-0.11 (0.07)	0.03 (0.04)	-0.00 (0.05)	0.15** (0.06)	-0.13* (0.08)	0.02 (0.05)	-0.02 (0.06)
Placebo					0.07 (0.06)	-0.06 (0.09)	-0.02 (0.06)	-0.05 (0.06)
p-value [TR = P]	.	.	.	.	0.08	0.43	0.47	0.66
Observations	1773	1774	1773	1773	1773	1774	1773	1773

Panel 2: Indegrees								
	Benchmark Model				Full Model			
	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior
Treatment	0.10** (0.04)	-0.09** (0.05)	0.05** (0.02)	0.05* (0.02)	0.12** (0.05)	-0.08 (0.05)	0.05* (0.03)	0.05* (0.03)
Placebo					0.07 (0.04)	0.04 (0.05)	0.01 (0.03)	0.01 (0.03)
p-value [TR = P]	.	.	.	.	0.17	0.05	0.13	0.15
Observations	8171	8167	8171	8172	8171	8167	8171	8172

► Full Sample

Conclusion

- We evaluate an intervention aiming at helping adolescents who face numerous challenges hindering their healthy development.
- We test an approach that operationalizes the concepts of self-persuasion and cognitive dissonance. Entrust students with responsibility of improving their social environment
- We find significant improvements in wide range of social outcomes
- We find significant improvements in target students' personal outcomes
- We show sensitive developmental periods require innovative approaches
- We can design cost-effective interventions for children in high neighborhood and socioeconomic disadvantages.

Treatment Booklets

Empati, insana verilmiş en güzel hediyedir arkadaşlar.
Empati hepimizde olan bir özellik.
Sadecce; bazılarımızda daha az, bazılarımızda daha fazla ...

EMPATİ

- Bir insanın, kendisini karşısındaki insanın yerine koyarak, onun duygu ve düşüncesini doğru olarak anlamasıdır.
- Empati kendi ayaktaabılarından çıkıp, bir süre başkasının ayaktaabısının içine girmektedir.
- Gerektiğinde olaylara başkasının gözlemleri ile bakabilmektedir.



Zorbanın en belirgin özellikleri:

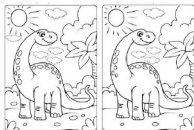
- Empati azlığı,
- Güvensizlik,
- Duyguları ve öfkeyi kontrol edememe,
- Kendisine güveni azaldığında hemen şiddete başvurması ve bunu pozitif bir şey gibi görmesi.

— Okuldaki zorbalıkta en önemli problem ise bu çocukların etrafında "arkadaşları" olması... Aslında bu kişiler arkadaşları çok, zorbanın uyduları... Yani aslında onu seven, ona güvenen gerçek arkadaşları değiller.

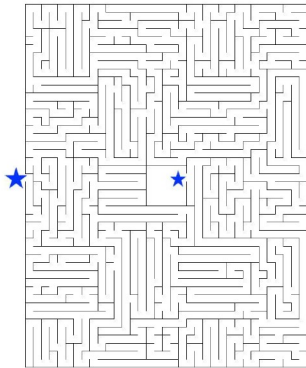
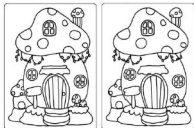


Placebo Activity Booklet

Aşağıdaki iki resim arasındaki 8 farkı bulalım!

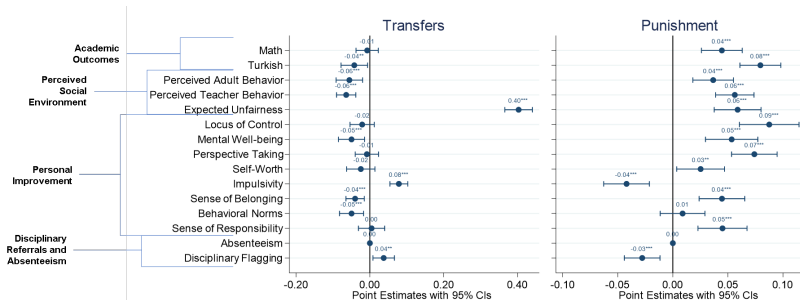


Aşağıdaki iki resim arasındaki 9 farkı bulalım!



◀ Back

Predictive Validity of the Third-Party Punishment Task



Balance at Baseline - Full Sample (Year 1)

	N	Pure Control Mean	Control Mean	Treatment Mean	p-value [T = PC]	p-value [T = C]	p-value [PC = C]
Male	21965	0.501	0.513	0.514	0.879	0.238	0.382
Age (months)	21859	142.679	142.419	142.047	0.494	0.380	0.880
Refugee (0,1)	21965	0.018	0.028	0.027	0.895	0.064	0.128
No. Siblings	17412	3.864	3.888	3.760	0.670	0.843	0.809
Computer at Home (0,1)	17412	0.263	0.250	0.287	0.863	0.735	0.924
Internet at Home (0,1)	17412	0.545	0.506	0.569	0.637	0.738	0.847
Willingness University (0,1)	17412	0.939	0.944	0.937	0.213	0.506	0.601
Raven Score	17413	11.647	11.523	11.821	0.775	0.809	0.932
Eyes Test Score	17642	7.509	7.412	7.547	0.721	0.942	0.776
Math Score	17413	3.810	3.824	4.021	0.690	0.367	0.790
Turkish Score	17413	4.194	4.195	4.413	0.641	0.371	0.845
Having a Friend	21965	0.807	0.779	0.805	0.120	0.829	0.154
Friendship Ties (in-degree)	21965	2.800	2.647	2.814	0.126	0.989	0.236
Rel. with Teachers	17406	4.040	4.055	4.017	0.303	0.395	0.726
Rel. with Adults	17396	3.831	3.845	3.816	0.414	0.432	0.718
Classroom Norms	17396	3.477	3.483	3.511	0.578	0.326	0.857
Awareness of World Issues	17398	3.442	3.398	3.391	0.601	0.114	0.421
Class Bullying	17396	1.587	1.619	1.580	0.542	0.948	0.600
School Bullying	17390	1.442	1.466	1.430	0.473	0.845	0.568
Ethnic Bias	17369	1.880	1.890	1.846	0.817	0.675	0.882
Belonging	17361	2.846	2.842	2.869	0.479	0.527	0.888
Locus of Control	17371	3.195	3.192	3.204	0.981	0.991	0.975
Perspective Taking	17343	3.168	3.135	3.172	0.565	0.852	0.475
Impulsivity	17336	2.122	2.124	2.109	0.379	0.402	0.838
Mental Wellbeing	17342	3.034	3.029	3.047	0.582	0.544	0.861

[◀ Back](#)

Comparison of Student Teachers with Other Students

	N	Non-Student Teachers Mean	Student Teachers Mean	p-value [NST = ST]
Male	17419	0.516	0.510	0.524
Age (months)	17338	160.258	159.242	0.000
Refugee (0,1)	17215	0.023	0.018	0.099
No. Siblings	13931	3.766	3.769	0.178
Computer at Home (0,1)	13932	0.274	0.267	0.256
Internet at Home (0,1)	13932	0.557	0.588	0.000
Willingness University (0,1)	13932	0.944	0.973	0.000
Raven Score	13950	12.122	13.224	0.000
Eyes Test Score	14688	7.698	8.767	0.000
Math Score	13951	3.349	3.969	0.000
Turkish Score	13950	3.855	4.710	0.000
Having a Friend	14602	0.782	0.982	0.000
Friendship Ties (in-degree)	17419	2.760	6.543	0.000
Rel. with Teachers	13927	4.032	4.133	0.000
Rel. with Adults	13921	3.820	3.852	0.149
Classroom Norms	13918	3.462	3.497	0.083
Awareness of World Issues	13921	3.435	3.541	0.000
Class Bullying	13918	1.567	1.421	0.000
School Bullying	13912	1.409	1.358	0.002
Ethnic Bias	13881	1.823	1.630	0.000
Belonging	13875	2.844	3.053	0.000
Locus of Control	13882	3.220	3.325	0.000
Perspective Taking	13851	3.197	3.391	0.000
Impulsivity	13845	2.147	2.127	0.303
Mental Wellbeing	13850	3.022	3.065	0.006

School Climate: Disciplinary Flagging

Panel 1: Full Sample				
	Year 1		Year 2	
	Benchmark Model		Full Model	
	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging
Treatment	-0.02** (0.01)	-0.02* (0.01)	-0.01** (0.01)	-0.01* (0.01)
Placebo		0.00 (0.01)		0.01 (0.01)
Control Mean	0.03	0.03	0.03	0.03
p-value [TR = P]	.	0.07	.	0.04
Observations	15950	15950	16538	16538

Panel 2: Juniors (Grades 5 and 6)				
	Year 1		Year 2	
	Benchmark Model		Full Model	
	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging
Treatment	-0.01 (0.01)	-0.01 (0.01)	-0.01** (0.01)	-0.01 (0.01)
Placebo		-0.00 (0.01)		0.01 (0.01)
Control Mean	0.03	0.03	0.03	0.03
p-value [TR = P]	.	0.42	.	0.12
Observations	7863	7863	6756	6756

Panel 3: Seniors (Grades 7 and 8)				
	Year 1		Year 2	
	Benchmark Model		Full Model	
	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging	Disciplinary Flagging
Treatment	-0.03*** (0.01)	-0.02** (0.01)	-0.01** (0.01)	-0.01 (0.01)
Placebo		0.01 (0.01)		0.01 (0.01)
Control Mean	0.04	0.03	0.03	0.02
p-value [TR = P]	.	0.02	.	0.04
Observations	8087	8087	9782	9782

School Climate: Unfair Behavior and Desire for Justice

Panel 1: Full Sample

	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment
Treatment	-0.03 (0.03)	0.11** (0.05)	-0.01 (0.04)	0.14*** (0.05)	-0.16*** (0.03)	0.34*** (0.05)	-0.14*** (0.04)	0.37*** (0.05)
Placebo			0.04 (0.04)	0.08 (0.07)			0.05 (0.04)	0.08 (0.06)
Control Mean	1.11	1.69	1.10	1.71	1.11	1.50	1.08	1.50
p-value [TR = P]	-	-	0.08	0.32	-	-	0.00	0.00
Observations	15923.00	15919.00	15923.00	15919.00	13798.00	13795.00	13798.00	13795.00

Panel 2: Juniors (Grades 5 and 6)

	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment
Treatment	-0.04 (0.04)	0.08 (0.06)	-0.01 (0.06)	0.09 (0.07)	-0.06* (0.03)	0.26*** (0.08)	-0.04 (0.04)	0.27*** (0.08)
Placebo			0.08 (0.06)	0.02 (0.11)			0.06 (0.05)	0.02 (0.07)
Control Mean	1.11	1.63	1.08	1.67	1.07	1.41	1.03	1.42
p-value [TR = P]	-	-	0.07	0.49	-	-	0.02	0.01
Observations	7852	7851	7852	7851	6428	6428	6428	6428

Panel 3: Seniors (Grades 7 and 8)

	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment	Transfers	Punishment
Treatment	-0.03 (0.03)	0.14** (0.06)	-0.02 (0.04)	0.20*** (0.07)	-0.24*** (0.04)	0.42*** (0.06)	-0.21*** (0.04)	0.47*** (0.06)
Placebo			0.01 (0.04)	0.13* (0.08)			0.06 (0.05)	0.13 (0.08)
Control Mean	1.11	1.75	1.11	1.74	1.14	1.59	1.12	1.57
p-value [TR = P]	-	-	0.45	0.44	-	-	0.00	0.00
Observations	8071	8068	8071	8068	7370	7367	7370	7367

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School Climate: Behavioral Norms and Relationship with Adults

Panel 1: Full Sample								
	Benchmark Model				Full Model			
	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior
Treatment	0.05*	-0.06**	0.03	0.03*	0.08**	-0.04	0.04*	0.04*
	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Placebo					0.07*	0.06*	0.01	0.03
					(0.03)	(0.03)	(0.02)	(0.03)
p-value [TR = P]					0.76	0.00	0.34	0.47
Observations	24339	24312	24338	24346	24339	24312	24338	24346

Panel 2: Juniors (Grades 5 and 6)								
	Benchmark Model				Full Model			
	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior
Treatment	-0.01	-0.04	-0.01	0.03	0.01	-0.00	0.00	0.05
	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)	(0.05)	(0.03)	(0.03)
Placebo					0.05	0.09*	0.02	0.05*
					(0.05)	(0.05)	(0.03)	(0.03)
p-value [TR = P]					0.35	0.02	0.46	0.97
Observations	9528	9500	9527	9533	9528	9500	9527	9533

Panel 3: Seniors (Grade 7 and 8)								
	Benchmark Model				Full Model			
	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior	Behavioral Norms	Expected Unfairness	Perceived Adult Behavior	Perceived Teacher Behavior
Treatment	0.09**	-0.08**	0.05**	0.03	0.12***	-0.05	0.05**	0.04
	(0.03)	(0.04)	(0.02)	(0.02)	(0.04)	(0.04)	(0.02)	(0.03)
Placebo					0.08*	0.04	0.01	0.02
					(0.04)	(0.04)	(0.03)	(0.03)
p-value [TR = P]					0.27	0.03	0.09	0.51
Observations	14811	14812	14811	14813	14811	14812	14811	14813

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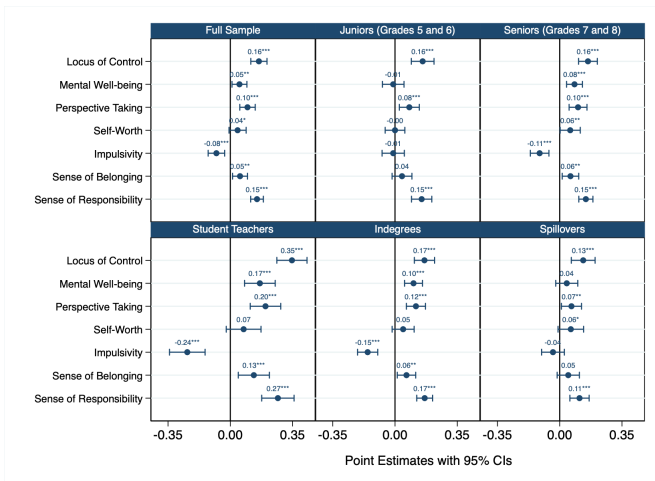
Personal Improvement: Test Scores

Panel 1: Student Teachers				
	Benchmark Model		Full Model	
	Math	Turkish	Math	Turkish
Treatment	0.11** (0.05)	0.01 (0.05)	0.10 (0.06)	0.05 (0.05)
Placebo			-0.03 (0.07)	0.09* (0.05)
p-value [TR = P]	.	.	0.04	0.42
Wild BS p-value	0.05	0.86	0.14	0.39
Observations	1776	1776	1776	1776

Panel 2: Indegrees				
	Benchmark Model		Full Model	
	Math	Turkish	Math	Turkish
Treatment	0.08* (0.04)	0.04 (0.03)	0.06 (0.04)	0.05 (0.03)
Placebo			-0.03 (0.05)	0.02 (0.04)
p-value [TR = P]	.	.	0.08	0.35
Wild BS p-value	0.06	0.14	0.15	0.15
Observations	8184	8184	8184	8184

► Full Sample

Personal Improvement: Social and Emotional Well-Being



Personal Improvement: Test Scores

Panel 1: Full Sample								
	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Math	Turkish	Math	Turkish	Math	Turkish	Math	Turkish
Treatment	0.05 (0.03)	0.02 (0.03)	0.05 (0.04)	0.01 (0.04)	-0.02 (0.03)	0.03 (0.03)	-0.03 (0.04)	0.05 (0.04)
Placebo			0.00 (0.04)	-0.01 (0.04)			-0.00 (0.05)	0.06 (0.06)
p-value [TR = P]	.	.	0.17	0.52	.	.	0.46	0.78
Observations	15950	15950	15950	15950	13875	13875	13875	13875

Panel 2: Juniors (Grades 5 and 6)								
	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Math	Turkish	Math	Turkish	Math	Turkish	Math	Turkish
Treatment	0.05 (0.04)	0.03 (0.04)	0.03 (0.05)	0.00 (0.06)	-0.01 (0.04)	0.02 (0.03)	0.01 (0.05)	0.05 (0.05)
Placebo			-0.04 (0.06)	-0.06 (0.06)			0.05 (0.07)	0.06 (0.07)
p-value [TR = P]	.	.	0.05	0.15	.	.	0.47	0.84
Observations	7863	7863	7863	7863	6477	6477	6477	6477

Panel 3: Seniors (Grades 7 and 8)								
	Year 1				Year 2			
	Benchmark Model		Full Model		Benchmark Model		Full Model	
	Math	Turkish	Math	Turkish	Math	Turkish	Math	Turkish
Treatment	0.06* (0.03)	0.01 (0.03)	0.08** (0.03)	0.02 (0.03)	-0.03 (0.03)	0.03 (0.03)	-0.04 (0.04)	0.04 (0.04)
Placebo			0.05 (0.04)	0.04 (0.03)			-0.04 (0.05)	0.03 (0.04)
p-value [TR = P]	.	.	0.48	0.65	.	.	0.92	0.62
Observations	8087	8087	8087	8087	7398	7398	7398	7398

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Distribution of Decisions in the Third Party Punishment Game

