

Reshaping Adolescents' Gender Attitudes:

Evidence from a School-Based Experiment in India

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Gender inequality

- ▶ Gender gaps in opportunities and outcomes for women and girls in developing countries, e.g., male-skewed sex ratio, low autonomy
- ▶ Economic progress alone unlikely to close these gaps, at least in the short-run
- ▶ Several govt policies have been tried, with varying success
 - ▶ Reserved seats for female politicians
 - ▶ Ban on sex-selective abortions
 - ▶ Financial incentives to have daughters and invest in them
- ▶ Govt was interested in tweaking and evaluating financial incentives
- ▶ We counter-proposed changing attitudes through schools
- ▶ Evidence on interventions shifting attitudes, e.g., female politicians (Beaman et al., 2009); cable television (Jensen and Oster, 2009)

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Can an attitude change program shift attitudes and behavior?

- ▶ **Hypothesis:** Thinking about and discussing gender gaps, human rights and economic arguments for gender equality, will change adolescent **attitudes** and consequently **aspirations** and **behavior**
 - ▶ Work with students in grade 7 to 10
 - ▶ Curricular activities embedded in school day once every 3 weeks for 2.5 years
- ▶ Study designed to follow sample for many years to test for impacts on age of marriage, female employment, sex ratio

Why run the program with adolescents and in schools?

- ▶ Adolescents are likely young enough to have malleable attitudes but old enough to think about these issues
- ▶ Schools are a way that the state can counterbalance influences children might have at home
- ▶ Potentially cost-effective to scale up if activities become part of regular part of standard curriculum — taught by regular schoolteachers, embedded in textbooks

Intervention

School-based sessions

- ▶ Designed and implemented by Breakthrough, a gender human rights NGO in India
- ▶ Facilitators led discussions and activities in school
- ▶ 26 classroom sessions over two and a half years
 - ▶ Session topics: Gender related attitudes; Gender related aspirations; Division of work/Attitude towards work; Tolerance of discrimination; Communication and leadership skills & girls
 - ▶ Supplemented by school clubs, video vans/street plays (once per year), orientation for school principals, training for 1 teacher per school

Intervention example: Discussion of aspirations

- ▶ Students are asked to identify their career aspirations and strengths and write them down
- ▶ All students share their strengths and aspirations
- ▶ The discussion (likely) reveals the commonalities across gender: Both genders want to become teachers, pilots, etc.
- ▶ Helps establish that both genders can have similar aspirations

Intervention example: Discussion of household chores

- ▶ Students are asked to identify who does various chores in their household, e.g., cooking, laundry
- ▶ Students share their answers and notice the commonality that women/girls do more chores
- ▶ Discuss why that is and whether it is fair
- ▶ If students say that women are better at these tasks, facilitator asks who does similar tasks outside the home
- ▶ Students discuss why men are cooks in restaurants but women cook at home, and whether society values both contributions equally

Intervention Example: Discussion of sexual harassment

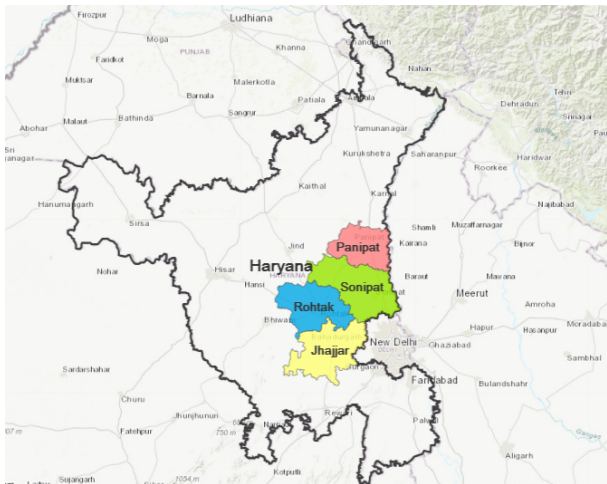
- ▶ Some boys are teasing girls
- ▶ The boys' friends discuss this with their parents
- ▶ Father tells them that this is sexual harassment and asks if he should talk to the friends
- ▶ The boys say that they would like to talk to their friends first
- ▶ Father agrees, saying that they will understand it better from someone their own age



Potential channels

- ▶ Preferences, e.g., less disutility from wife working
- ▶ Beliefs/knowledge, e.g., about women's potential economic contributions, about social norms
- ▶ Skills, e.g., to communicate preferences to parents

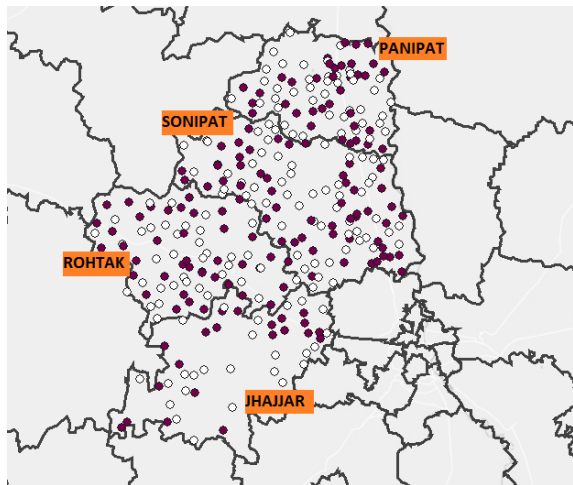
Haryana, India



Research design

- ▶ Randomized controlled trial design with school level intervention
- ▶ Universe of 314 government schools in four districts of Haryana
- ▶ 150 treatment and 164 control schools
 - ▶ Stratified by district, coed status, school size, and distance to district capital
- ▶ Baseline in Fall 2013
 - ▶ Surveyed 14,810 students and 5,483 parents
 - ▶ Surveyed students in grades 6 and 7
 - ▶ Enrolled 55% girls, 45% boys to match enrollment gender ratio
- ▶ Intervention from April 2014 to September 2016
 - ▶ Target students in grades 7, 8 and 9
- ▶ Endline in Winter 2016-17
 - ▶ Surveyed same 13,989 students
 - ▶ Surveyed students in grades 9 and 10
 - ▶ 94.16% retention rate

Study location

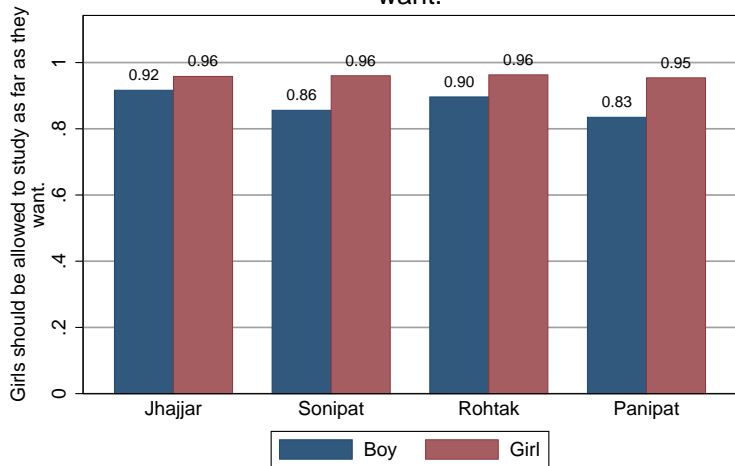


Descriptive statistics: School characteristics at baseline

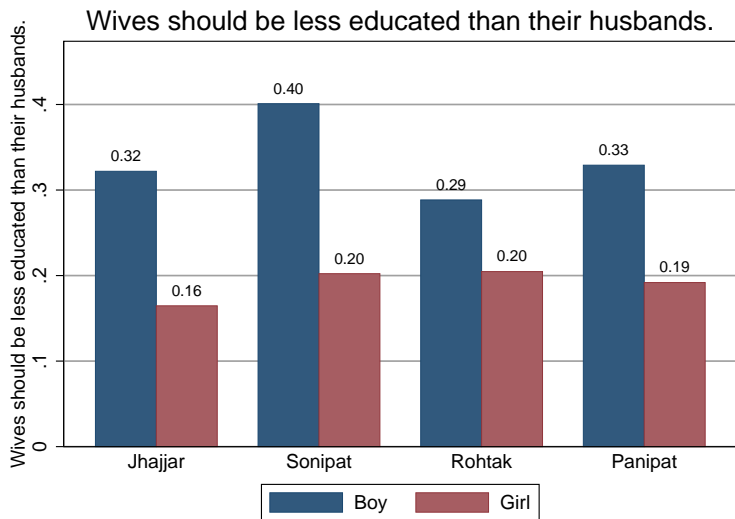
Variable	Treatment	Control	Standardized Diff
Number of schools	149	164	
Urban	0.107 [0.311]	0.073 [0.261]	0.119
School is Coed	0.698 [0.461]	0.677 [0.469]	0.045
Boys in 6th and 7th grade	53.912 [48.392]	52.995 [40.152]	0.021
Girls in 6th and 7th grade	66.709 [60.389]	63.078 [58.318]	0.061
Total number of teachers	17.766 [9.988]	17.173 [7.987]	0.066

Measuring attitudes

Girls should be allowed to study as far as they want.



Measuring attitudes



Outcome variables

- ▶ Three pre-specified primary outcomes

1. **Gender attitude index**

- ▶ Eighteen questions on attitudes towards gender-equality in education, employment, gender roles and fertility

2. **Gender aspirations index**

- ▶ Five questions capturing expectations on academic performance, educational goals and occupation

3. **Gender behavior index**

- ▶ Twelve questions capturing communications and interaction with other gender, chores within and outside household, communication with parents, decision making and school attendance

Basic Specification

Analysis guided by pre-analysis plan

For student i in school j

$$Y_{ij} = \beta_0 + \beta_1 \text{Treat}_j + \beta_2 Y_{ij}^0 + \beta_3 \mathbf{X}_{ij} + \epsilon_{ij}$$

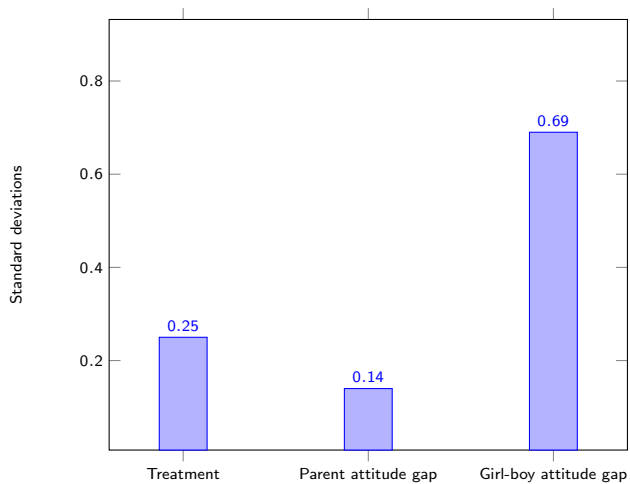
Y_{ij}	Outcome of interest measured at endline
Treat_j	Treatment indicator
Y_{ij}^0	Baseline analogue of the outcome
\mathbf{X}_{ij}	Other control vars (gender-grade and district-grade FEs in basic spec)
ϵ_{ij}	Error term clustered at the school level

Main findings

	Gender Attitudes Index (1)	Aspirations Index (2)	Girls' Behavior Index (3)	Boys' Behavior Index (4)	Behavior Index (5)
Treated	0.250*** [0.019]	0.052*** [0.019]	0.199*** [0.031]	0.461*** [0.031]	0.323*** [0.022]
Extended controls	No	No	No	No	No
Observations	13,989	13,989	7,788	6,201	13,989

Notes: Regression includes Gender-grade & district-gender fixed effects, Baseline student characteristics and Controls for asset ownership.

Benchmarking effect size



Social desirability

- ▶ One concern is “social desirability bias” or “demand effects”
- ▶ We use a tool developed by social psychologists to measure tendency to give socially desirable answers (Crowne & Marlowe, 1960)
- ▶ Use subset of thirteen questions (out of 33) and classify responses by whether they give the socially desirable answer
- ▶ Examine patterns for sub-sample of respondents with low tendency to just give the socially desirable answer

Robustness to social desirability bias

	Gender Attitudes Index (1)	Aspirations Index (2)	Girls' Behavior Index (3)	Boys' Behavior Index (4)	Behavior Index (5)
Treated	0.223*** [0.025]	0.065** [0.027]	0.189*** [0.043]	0.488*** [0.041]	0.328*** [0.028]
Low social desirability score	-0.108*** [0.021]	-0.099*** [0.021]	-0.127*** [0.033]	-0.001 [0.032]	-0.055*** [0.019]
Treated*Low social desirability score	0.045 [0.031]	-0.019 [0.032]	0.017 [0.046]	-0.040 [0.047]	-0.008 [0.028]
Extended controls	No	No	No	No	No
Observations	13,989	13,989	7,788	6,201	13,989

Effect on attitude subindices

	Education Attitudes	Employment Attitudes	Attitudes towards Female Gender Roles	Fertility Attitudes
	(1)	(2)	(3)	(4)
Treated	0.190*** [0.020]	0.319*** [0.021]	0.223*** [0.021]	0.036** [0.018]
Extended controls	No	No	No	No
Observations	13,989	13,989	13,989	13,989

Effect on behavior subindices

	Interaction with the Opposite Sex (1)	Participation in HH Chores (2)	Supporting female relatives' ambitions (3)	Girls' Mobility (4)	Girls' Decision- making (5)
Treated	0.277*** [0.041]	0.078** [0.035]	0.484*** [0.029]	0.092*** [0.026]	0.016 [0.029]
Treated*Female	0.145*** [0.045]	-0.070 [0.044]	-0.453*** [0.033]		
Extended controls	No	No	No	No	No
Observations	13,989	13,989	13,989	7,788	7,788

No heterogeneity by baseline parent gender attitudes

	Gender Attitudes Index (1)	Aspirations Index (2)	Behavior Index (3)
Treated	0.272*** [0.039]	0.046 [0.037]	0.337*** [0.037]
Treated*Above median baseline parent attitudes	-0.028 [0.041]	0.008 [0.039]	-0.018 [0.034]
Treat+Treat*Above median parent attitudes=0	0.00	0.01	0.00
Extended controls	No	No	No
Observations	13,989	13,989	13,989

Treatment group views social norms as more progressive

Towards work

	women should be allowed to work	Child agrees that... community thinks women should be allowed to work	women should be allowed to work and thinks community will not oppose them
	(1)	(2)	(3)
Treated	0.129*** [0.011]	0.052*** [0.013]	0.072*** [0.012]
Extended controls	No	No	No
Observations	6,862	6,464	6,409

Treatment group views social norms as more progressive

Towards education

	women should be allowed to study in college even if it is far away (1)	Child agrees that... community thinks women should be allowed to study in college even if it is far away (2)	women should be allowed to study in college and thinks community will not oppose them (3)
Treated	0.084*** [0.008]	0.056*** [0.014]	0.067*** [0.013]
Extended controls	No	No	No
Observations	7,075	6,753	6,718

Classroom-level observed behavior

- ▶ Initial feedback: Collect harder data on behavior change
- ▶ Data for 1/3 of sample
 - ▶ 193 schools (coed school + principal gave permission)
 - ▶ Younger cohort only
- ▶ 3 classroom-level activities, designed to not prime gender equity
 1. Nominate classmates for inter-school 'general-knowledge quiz competition: Are girls nominated?
 2. Class discussion: How much do girls participate?
 3. Break into groups for poster-making activity: How many groups are co-ed?

Impacts on observed behavior

Classroom games, younger cohort

	% girls among quiz represen- tatives (1)	% of comments given by girls (2)	% girls among class discussion participants (3)	% of groups that are mixed-gender (4)
Treated	-0.028 [0.038]	0.011 [0.028]	0.019 [0.025]	0.006 [0.015]
Control group mean	0.60	0.54	0.55	0.05
Control group s.d.	0.28	0.19	0.16	0.11
Observations	193	192	192	193

Summary of findings

- ▶ Intervention increased gender attitude index by 0.25 standard deviations, both for boys and girls
- ▶ Intervention also increased gender equitable behavior index, with external constraints perhaps mattering more for girls than boys
- ▶ No strong evidence of impact on aspirations
- ▶ Participants view social norms as more progressive

- ▶ Results don't appear to be driven by social desirability bias/demand effects
- ▶ However, no observed impact on observed classroom-level behaviors

Planned follow-up surveys

- ▶ Two years after first endline (late 2018)
 - ▶ Attitudes
 - ▶ School enrollment
 - ▶ Behaviors (ideas welcome!)

- ▶ Long run
 - ▶ Completed education
 - ▶ Employment of female students and male students' wives
 - ▶ Age of marriage and childbearing
 - ▶ Sex composition of children

Thank you

Comments appreciated at tj9d@virginia.edu