

1 Introduction

Along many different dimensions – from life expectancy to educational attainment to decision-making power in the household – gender gaps favoring men are larger in poorer countries (Jayachandran 2015). Data on stated attitudes about gender equality follow the same pattern, with people in poorer countries more likely to endorse girls getting less education than boys and believing that violence against women is sometimes justified. Even against this backdrop, though, India stands out for its unequal opportunities and outcomes for women. The economic consequences of this gender discrimination are potentially large (Duflo 2012).

One explanation for India’s exceptionalism is that its religious and cultural institutions give families economic incentives to have fewer girls and to invest less in them. For example, under the system of patrilocal exogamy, girls join their husbands’ family when they marry while eldest sons provide for their parents and inherit the family land, providing incentives for parents to favor sons (Deininger, Goyal, and Nagarajan 2013; Jain 2014).

However, economic rationales seem unable to fully explain the level of gender discrimination in India. For example, investments in girls’ health and education ought to have financial returns for parents in the form of lower dowry payments or a higher-quality son-in-law. Thus, in addition to incentives differing in India, *preferences* might be systematically different in India. A preference-based explanation might explain, for example, why Indian women are more likely to say that a husband beating his wife is justified compared to women in other equally poor countries. Insofar as these preferences are deeply held and difficult to change through the pro-girl policies in place today such as financial incentives to have daughters and to educate them, they may represent a significant challenge to erasing discrimination against women. At the same time, understanding the process of attitude formation and transmission offers the possibility that reforming basic gender-equality attitudes can produce long-lasting improvements in outcomes for women.

Where do these preferences, or gender attitudes, come from? One line of research emphasizes the deep historical roots of gender attitudes. For example, they are influenced by religious doctrine

(Psacharopoulos and Tzannatos 1989; Seguino 2011) as well as the agricultural environment societies faced centuries ago (Alesina, Giuliano, and Nunn 2013). Other work, mostly in the context of developed countries such as the United States and Australia, has focused on the shorter-run transmission of attitudes from one generation to another; parents' gender attitudes and behaviors have a significant impact on their children's fertility choices, household division of labor between men and women, and women's participation in the labor market (Fernandez, Fogli, and Olivetti 2004; Fernandez and Fogli 2006; Grosjean and Khattar 2014).

Relatively little research examines the formation of gender attitudes in developing countries in general, or in India specifically. Two notable exceptions are Beaman et al. (2009)'s study of attitudes associated with female leadership of village councils in India, and Jensen and Oster (2009)'s research on the impact of television on household female empowerment. We add to this literature by examining the intergenerational transmission of gender attitudes in India. The parent-child correlation of gender attitudes might differ in the social context of South Asia for a number of reasons. For example, intergenerational transmission might be especially strong in South Asia because of residence in large joint families and parents' control over when and whom their children marry. The endogamous caste system also means that people interact within a social network that holds relatively un-diversified attitudes.

Besides studying an important setting, we also advance the literature by using direct measures of gender attitudes collected simultaneously from children and their parents. Because we have a rich set of variables to control for many other contextual factors, we also improve on the causal identification found in many other papers on intergenerational transmission (though our ability to establish causality is by no means perfect). Specifically, our sample comprises children from 314 schools in the Indian state of Haryana, plus their parents, and we examine the correlation between children's and parents' attitudes, controlling for school fixed effects or even school-grade-gender fixed effects, as well as several household variables that might be correlated with parental attitudes. The survey measured a wide range of gender attitudes including about education, working outside the home, and tolerance of violence.

Our main finding is that parent and child attitudes are strongly positively correlated, with mothers having greater influence than fathers. There is also some suggestive evidence of an interactive effect with mothers' having relatively more influence on their daughters than on their sons and fathers having almost no influence on daughters. The analysis combines the responses about the various gender attitudes into an index, where a higher value means less discriminatory attitudes. A one standard deviation increase in a parent's gender attitude index leads to a 0.16 standard deviation increase in the child's index. The effect for mothers is 50% larger than the effect for fathers. These results point to the durability – but not complete persistence – of gender attitudes over generations.

To benchmark the magnitude of these effect sizes, we also construct the average gender index of the child's peers, specifically classmates in the same school, grade, and of the same gender, excluding herself or himself. Increasing one parent's attitudes by a unit has the same effect as increasing each of the child's peers by one unit; thus a parent is more influential than a peer, but collectively peers – and the broader classroom environment – also exhibit strong influence on a child's gender attitudes. The effects of peers with progressive attitudes is particularly strong in coed environments, where exposure to both the views as well as the aspirations of the other gender is greater.

Ultimately one cares about behavior and outcomes more than attitudes per se, so we also explore whether parental attitudes have consequences for their children's outcomes. We find that girls with more gender-discriminatory parents intend to drop out of school earlier than those with more gender-progressive parents. This result indicates the influence of parental attitudes not only on child attitudes but also on their likely long-term welfare.

In the following sections, we describe the data and lay out the empirical strategy, and then present the results and conclude.

2 Data

2.1 Sampling and data collection

We use data from a survey conducted between October 2013 and January 2014 and covering 314 government schools located in Rohtak, Sonapat, Panipat and Jhajjar districts of Haryana. Adjacent to Delhi, these districts have some of the lowest (i.e., most male-skewed) sex ratios in the country. We conducted in-school surveys of roughly 15,000 students who were in grades six and seven at the time. For a 40% random sample of these students, we visited the household to survey one of the parents, randomly choosing either the mother or the father.

The survey was the first wave of a student-level panel dataset designed to evaluate a school-based intervention. Decisions about sample size and school and respondent selection were made based on the design of that evaluation, for example to reduce sample attrition from the panel and ensure sufficient power to appropriately evaluate the intervention. In choosing sample schools, we started with the universe of 607 government owned and operated secondary schools that offered grades six through nine. We narrowed this list to 347 schools based on District Information System for Education (DISE) 2011 data on school enrollment rates and the rate of change in enrollment by grade, to ensure a sufficient sample size of students and to minimize sample attrition in later waves due to school dropout. In villages with multiple schools, only one school per village was selected at random.¹ We made initial visits to these 347 schools and then narrowed the list to 314 schools; 33 schools were excluded from the final sample because of chronically low actual attendance, despite high official enrollment. The 314 schools form the sample used in this study. Of these, 59 schools enrolled only girls and 40 schools were for boys only, which the remaining 215 schools enrolled both boys and girls. Each school has an average of 84 students per grade per school.²

¹ If these schools were adjacent to each other or shared a building, we considered them as a single school.

² The sampling procedure implies that the schools included in the study deviate from the universe of schools in a number of ways. First, our survey does not cover the 731 private unaided schools which are disproportionately in urban areas; thus, urban and wealthier students are underrepresented. Second, among government schools, we excluded schools where grades six and seven had a combined average enrollment of less than 45 students; the government schools in our sample have higher enrollment and are in larger villages than the universe of government schools.

To select students within schools for the sample, we randomly chose among those whose parents gave informed consent for their child to participate in the study and who personally agreed to participate, stratifying by gender and grade in the ratio Female 6th:Male 6th:Female 7th:Male 7th of 3:2:2:2. An additional criterion was that the student attended school on the survey day. The students with chronically low school attendance or whose parents were opposed to the survey are under-represented in the data (though the fact that the consent rate was not lower for girls suggests that providing consent was not systematically related to parental gender attitudes).

Boys are more likely to attend private schools than are girls. It is for this reason of higher female than male enrollment in government schools that we surveyed more girls than boys. The reason for specifically sampling more grade 6 girls was because we expect lower attrition among them. Importantly, wealthier families send their children to private schools, so if every family is more likely to send their sons than daughters to private schools, the boys in government schools will be from relatively poorer families than the girls. When making comparisons between boys and girls, we correct for this differential selection into our sample by household wealth for boys versus girls (on average, higher household wealth is associated with more progressive gender attitudes).

One parent of a random 40% subsample of the surveyed students participated in a household survey.³ We selected at random whether to interview the father or the mother. If after multiple visits and follow-up phone calls, we could not interview the selected parent, we randomly chose a replacement household. The completion rate of the household survey was higher for mothers (89.6%) than for fathers (70.2%) because fathers were more often away for work during the day-time hours when the survey was conducted. Our final dataset consists of 2439 boys and 3044 girls, and 2379 fathers and 3104 mothers, corresponding to 5483 parent-child pairs.

2.2 Descriptive statistics

Table 1 summarizes some key variables for the sample. The average age for both boys and girls is between 11 and 12 years. The mean age is 35 years for mothers and 40 years for fathers.

³ Budget constraints were the reason why only 40% of parents were chosen.

What is striking is the difference in illiteracy between mothers (39%) and fathers (16.4%), reflecting large differences in school enrollment between boys and girls in the previous generation. The table also reports differences in the number of other children in the household, with girls growing up in larger households than boys, consistent with son-biased fertility stopping rules.

As mentioned above, boys in government schools are from systematically poorer families than are girls. Thus despite girls growing up in larger families, the boys in our sample are more likely to have illiterate parents and are less likely to have a flush toilet at home.

The survey included a number of questions on gender equity attitudes answered by both students and parents, covering topics such as gender roles within the household and in public life and aspirations for boys and girls. A gender index aggregates the responses for the nine questions listed in Table 2 into a single variable. Surveyed parents and students were asked if they agree with these nine statements. An indicator variable equals one if the respondent answered “Agree” or “Strongly agree” (“Disagree” or “Strongly disagree”) if the statement was in favor of (opposed to) gender equality and female empowerment. The gender index is the average value of the nine dummies, so ranges from 0 to 1. The standard deviation of this variable is about 0.2 for both students and parent. We generated an additional measure of gender attitudes via principal component analysis (PCA) using the same nine variables with five-level responses (“Strongly agree”, “agree”, “neutral”, “disagree” and “Strongly disagree”); the alternative measure is the first principal component of these variables. The principal component construction was done separately for students and parents; that is, the weights placed on each variable are allowed to differ for students versus their parents.⁴ By construction, the standard deviation is one among students and among parents. A higher gender index and PCA mean more gender equitable views.

The bottom of Table 2 shows the average gender index and PCA for boys, girls, fathers and mothers. On both measures, fathers and mothers are relatively close to each other, with fathers slightly more gender equitable. However, among the adolescents, girls are considerably more

⁴ So that the weights placed on each of the 9 variables is not skewed by the fact that the sample includes more females than males, each gender was weighted equally when conducting the PCA, i.e., female observations were downweighted.

gender equitable than boys their age. Figure 1 shows the full distribution of the gender index variable, with girls' gender index shifted to the right of boys', while mothers' distribution shifted slightly to the left (less progressive) compared to fathers and much to the left compared to girls.⁵

Table 3 examines the gender differences in attitudes in a regression framework. The lower gender index (less progressive views) of mothers compared to fathers is statistically significant but small in magnitude (less than 0.1 standard deviation). Girls have more progressive attitudes than boys, and the difference is over 0.6 standard deviations.

2.3 Comparability of boys and girls

The regression in column 2 of Table 3 is the first example of our analysis examining heterogeneity by child gender. Because of the wealth difference for the two genders in our sample, one concern is that the gender differences are really measuring household wealth differences. Thus, our main specifications include a household wealth control in parallel to child gender. Specifically, we generate the propensity score to be a boy by running a probit regression of being a boy on several household characteristics.⁶ (The propensity score variable has much more explanatory power over gender attitudes than using principal component analysis to construct a wealth index, and thus is a more conservative way to control for wealth differences across households.)

Column 3 repeats column 2 but controlling for this propensity score variable. The positive

⁵ These summary statistics are suggestive that girls' attitudes might become less progressive over time, but we cannot conclude this definitively because we cannot rule out that the patterns reflect cohort effects rather than age effects.

⁶ These characteristics include dummies based on student responses for the following: family owns a house, house is pukka, house is connected to electricity, house has a flush toilet, house has a non-flush toilet, house has tap water, house has a separate kitchen, child had two meals each day in the last seven days, family owns a cellphone, family owns a TV, family owns a radio, family gets newspapers daily, family gets magazines, and family owns a computer/laptop. Dummies are also generated using student responses for whether father is illiterate, father finished primary school, father finished secondary school, father works part-time, father works full-time, and corresponding responses for mothers. We include dummies based on parent responses for whether respondent has no income, respondent is Scheduled Caste, respondent is Scheduled Tribe, household owns a house, households owns some land, and whether family owns each of the following household items: radio/tape recorder, computer/laptop, TV/Cable TV/Satellite TV/Dish TV, cycle, motorcycle/moped/scooter, car/jeep/truck/tractor/other 4 wheeler, refrigerator, fan, cooler/air conditioner, kerosene stove/gas stove, kerosene lamp, landline telephone, mobile telephone, sewing machine, thresher, water pump, bullock cart, livestock, and washing machine. Missing values were replaced with the sample mean and flags were created and included in the PCA. The propensity score to be a girl is 1 - propensity score to be a boy.

coefficient on the propensity to be a girl (richer household) indicates that gender attitudes are systematically more progressive in wealthier families. Reassuringly, though, adding the control variable does not change the coefficient on *Girl* by very much.

Note that a similar concern could pertain to the comparison of mothers and fathers due to the lower survey response rate by gender and the selection into being home and available for the survey. Constructing a propensity score to be surveyed based on work status, flexibility of hours, household wealth, ownership of a cellphone (for scheduling the survey) and several other variables, we find that for both mothers and fathers, the propensity to be surveyed has no correlation with gender attitudes (see Appendix Figure 1). Thus to keep the specifications more parsimonious, we in general do not regression-adjust for selection into the parent sample by gender, though we do show in Appendix Table 1 that doing so has no appreciable effect on the coefficients.

3 Empirical strategy

3.1 Average effect of parental attitudes on child attitudes

The goal of the empirical analysis is to measure the strength of the intergenerational transmission of gender attitudes from parents to children. Our main specification to measure the average relationship is follows:

$$ChildGA_{igcsd} = \alpha_1 ParentGA_{igcsd} + \gamma_s + \delta_{gcd} + \epsilon_{igcsd} \quad (1)$$

The outcome *ChildGA* is the gender index for student *i* of gender *g* in class (i.e., grade) *c* in school *s* in district *d*. The key regressor is the gender attitude index of the surveyed parent, *ParentGA*. One concern in interpreting α_1 as a causal effect is that *ParentGA* might be correlated with gender attitudes in the community. To control for community attitudes, we include school (i.e., village) fixed effects. Thus, the comparisons are between students in the same school. Girls and boys might be affected differently by community attitudes, so we also include district-grade-gender fixed effects; these also control for grade-specific characteristics that are common across

schools in the district such as the school curriculum. We also show that the results are robust to not including any fixed effects, including school-gender-grade fixed effects, and to also adding a household wealth index.⁷ The standard errors allow for non-independence (i.e., clustering) of the error term, $\epsilon_{igc\text{sd}}$, by school.

We also estimate versions of equation 1 using the first principal component (*ChildPCA* and *ParentPCA*) instead of the gender index and using child educational aspirations as the outcome.

It is important to acknowledge that definitively identifying the causal effect of parent attitudes on children is difficult because shared environmental characteristics might influence both parent and child attitudes and vary even within a village (for example, by neighborhood). The fact that our point estimates are similar with and without school fixed effects is at least reassuring that the parental attitudes variable measuring something specific to the family rather than the broader context.

Another concern is that the direction of causality could run from children to parents rather than from parents to children. Econometrically, we have no solution to this problem, but we would argue that it is more plausible that parents are influencing the views of their 11 to 12 year old children than vice versa.

3.2 Heterogeneity by parent and child gender

Examining heterogeneity in the effects helps to determine the pathways through which transmission occurs. First, we examine heterogeneity by the parent's gender by including the main effect *Mother* and the interaction of *Mother* and *ParentGA* in equation 1. A positive coefficient on the interaction term implies that mothers are more influential than fathers.

Second, we examine heterogeneity by student gender by including the main effect *Girl* and the interaction term $Girl \times ParentGA$. A positive coefficient on the interaction terms means that girls are more influenced by their parents than boys are. In all of the regressions that include interactions with *Girl* we also include parallel variables with *PropBoy* (the propensity score to be

⁷ The reason our main specification does not include school-gender-grade fixed effects is that we also include peer gender attitudes in some analyses, and these only vary at the school-gender-grade analysis

a boy), for the reasons described in Section 2.3. Thus, the specification to measure heterogeneity by child gender is

$$\begin{aligned} ChildGA_{igcds} = & \alpha_1 ParentGA_{igcsd} + \alpha_2 ParentGA_{igcsd} \times Girl_{igcsd} + \beta_1 ParentGA_{igcsd} \times PropBoy_{igcsd} \\ & + \beta_2 PropBoy_{igcsd} + \gamma_s + \delta_{gcd} + \epsilon_{igcds} \end{aligned} \quad (2)$$

Note that the main effect of *Girl* is absorbed by the district-grade-gender fixed effects.

Third, we examine whether there are same-gender effects with mothers being relatively more influential with girls and fathers with boys:

$$\begin{aligned} ChildGA_{igcds} = & \alpha_1 ParentGA_{igcsd} + \alpha_2 ParentGA_{igcsd} \times Girl_{igcsd} + \alpha_3 ParentGA_{igcsd} \times Mother_{igcsd} \\ & + \alpha_4 ParentGA_{igcsd} \times Mother_{igcsd} \times Girl_{igcsd} + \delta_1 Mother_{igcsd} \times Girl_{igcsd} \\ & + \delta_2 Mother_{igcsd} + \mathbf{PropBoy}_{igcsd} \cdot \beta + \gamma_s + \delta_{gcd} + \epsilon_{igcsd} \end{aligned} \quad (3)$$

In this specification, α_4 represents the differential impact of mothers' attitudes on girls (relative to their effect on boys or relative to the impact of fathers on girls). **PropBoy** in this case is a vector of the parallel variables to those that include *Girl*.⁸

4 Results

4.1 Main results on the intergenerational transmission of gender attitudes

Table 4 presents the main results on the intergenerational transmission of gender-equity attitudes. Column 1 shows the unadjusted univariate relationship between the child and parent gender indices, and column 2 includes school and district-grade-gender fixed effects (our preferred specification). We find a positive correlation between the gender equity attitudes of parents and their

⁸ **PropBoy** includes *PropBoy*, *PropBoy* × *ParentGA*, *PropBoy* × *ParentGA* × *Mother*, and *PropBoy* × *Mother*.

children that is robust to including the fixed effects.

Columns 3 and 4 examine heterogeneity by the parent's gender. We find that mothers' attitudes are more influential than fathers attitudes. This pattern remains large and statistically significant across our various robustness checks. The interaction coefficient of 0.073 compared to the main effect of .115 in column 4 implies that the effect of mothers' attitudes is 60% larger than the effect of fathers' attitudes.

Columns 5 and 6 include interactions with child gender. We find a smaller effect of parent attitudes on girls. However, unlike the heterogeneity by parent gender, this pattern is not robust across all specifications. For example, we do not find a significantly smaller effect for girls either when we include the more restrictive school-grade-gender fixed effects or when we combine the gender variables using principal component analysis). Thus, while the point estimates are suggestive of smaller effects for girls, we consider the evidence tenuous.

Finally, in columns 7 and 8, we include the triple interaction of *ParentGA*, *Mother*, and *Girl* in order to separately estimate the mother-daughter, mother-son, father-daughter, and father-son correlations. The point estimate suggests that mothers have greater influence on their daughters than on their sons, although the coefficient is not statistically significant. This qualitative finding is corroborated by responses during focus group discussions with students conducted in 15 schools. The mother was the largest source of influence for 75% of girls and 54% of boys. In contrast, 32% of boys and 17% of girls said their father is the most important influence.

Table 5 estimates similar specifications as Table 4 but using the PCA-based measure with qualitatively similar results. As mentioned, the heterogeneity by child gender in columns 5 and 6 is smaller in magnitude and not statistically significant. As another robustness check, Appendix Table 1 shows the results for the gender index when school-grade-gender fixed effects are included (odd columns) and additionally including a household wealth index in parallel to *ParentGA*. The results are robust to these more restrictive specifications. In particular, we continue to find that parental attitudes, especially mothers' attitudes, exert a strong influence on children's attitudes.

4.2 Comparing the effect of parents and peers

Peers and the classroom environment might also influence adolescents' gender attitudes. As a way of gauging whether the effect of parents' attitudes is large or small, we augment the specification in equation 1 with a measure of the average gender attitudes in the child's peer group. We define the peer group as the other same gender students in the same grade in the school. The peer set is parsed by gender because most interaction is *de facto* gender segregated, even in co-ed schools. Because the estimates control for school fixed effects, the estimate of peer effects holds the school environment fixed, but there might be omitted class-level factors (e.g., teachers, textbooks). Thus, we interpret these coefficients as representing the effect of the classroom environment, including peer effects, rather than the pure effect of other students.

Table 6 shows that a unit increase in classmates' average gender index is associated with a 0.14 unit (Column 1) or 0.13 unit (Column 2) increase in a student's gender index ($p < 5\%$). Column 2 also includes the parent gender index, and the effect of peers is slightly smaller than the effect of parent attitudes (0.16, $p < 0.01$).

The effect of peers' attitudes might be very different in different environments, in particular coed versus single sex schools. Coed schools, even with social segregation on the basis of gender, might offer more exposure with students of the other gender. Table 7 reports the influence of same-sex classroom peers, comparing coed to single sex environments. Column 2 shows that peer influences are particularly salient in coed environments, with a unit increase in classmates' average gender index associated with 0.40 unit increase in a student's gender index ($p < 5\%$). Column 3 which introduces terms to examine the role of peer attitudes on girls versus boys in different types of schools, shows no particular difference in this effect by gender.

On the one hand, these results indicate that classroom-based influences are important in the formation of children's gender equality attitudes, especially in coed schools. On the other hand, they point to the importance of parents because a one unit increase in one parent's attitudes has as much impact as raising the entire class's attitudes.

4.3 Effects on educational aspirations

We next examine whether parental gender attitudes affect intended behavior. Table 8, columns 1 to 4, examine whether parents' gender attitudes affect the desire to continue school beyond high school (grade 12). We find a strong positive relationship between the parent gender index and girls' plans for education. Gender-progressive parents appear to create an environment where girls aspire to higher education.

Table 9 compares the impact of peers and parents on educational aspirations. In this case, the effect of the classroom environment is larger than the effect of parents, indicating that peers and teachers exert strong influence in the education sphere. Table 10 examines the impact of peers on educational aspirations in coed versus single sex schools. In column 3, the table reports that the classmates' attitudes have a significant impact on girls' educational aspirations. However, the effect is diametrically opposite in single sex schools ($-1.7, p < 0.10$) compared to coed ones ($+1.7, p < 0.10$). For girls in single sex schools, more progressive attitudes of other peers seem to dampen the student ambitions. However, in coed schools, a social environment that includes boys with progressive gender attitudes boosts educational aspirations significantly.

Thus, there might be scope for increasing girls' aspirations through school-based interventions. While girls' aspirations might not be a sufficient condition for them to continue with higher education (e.g., their parents might insist they get married), but it seems like a necessary, or at least very helpful, condition.

5 Conclusion

This paper examines the intergenerational transmission of attitudes toward gender equality in the context of a developing country, and specifically one with especially large gender gaps in outcomes. Using survey data that directly and simultaneously measured these attitudes among school children and their parents in rural India, we find that child attitudes are strongly influenced by parent attitudes. We also find evidence of a meaningful effect of classmates' attitudes, especially

in coed environments. Finally, we show that there is also a strong correlation between parent attitudes and outcomes for children such as educational aspirations, underlining the critical role of attitudes on long term welfare.

Our findings should be read with a few caveats. First, we do not address selection into school attendance, and both the degree of gender-discriminatory attitudes and their intergenerational transmission might be very different in those families that hold especially conservative views and do not allow their children, especially girls, to study through grade six. A related issue is that just because we uncovered evidence of intergenerational transmission of gender-equality attitudes in this setting does not imply that these findings can be readily generalized to all contexts. Participants in our study in rural Haryana, which has one of the poorest child sex ratios in India, might simultaneously hold conservative gender views and be particularly motivated to transmit those views to their children.

Second, while we examine the effect of parent attitudes on a number of proximate outcomes, the cross-sectional nature of the data source does not allow us to estimate the impact of parent attitudes on long term child welfare measures such as years of schooling, occupational choice, marriage and fertility. The role of parent attitudes might be mitigated once children are older, are financially independent, and do not live with their parents.

Nonetheless, the findings suggest the importance of policies that address both parent and child gender equality attitudes as a way to improve outcomes for women.

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Figure 1: Distribution of gender index for female versus male students and parents

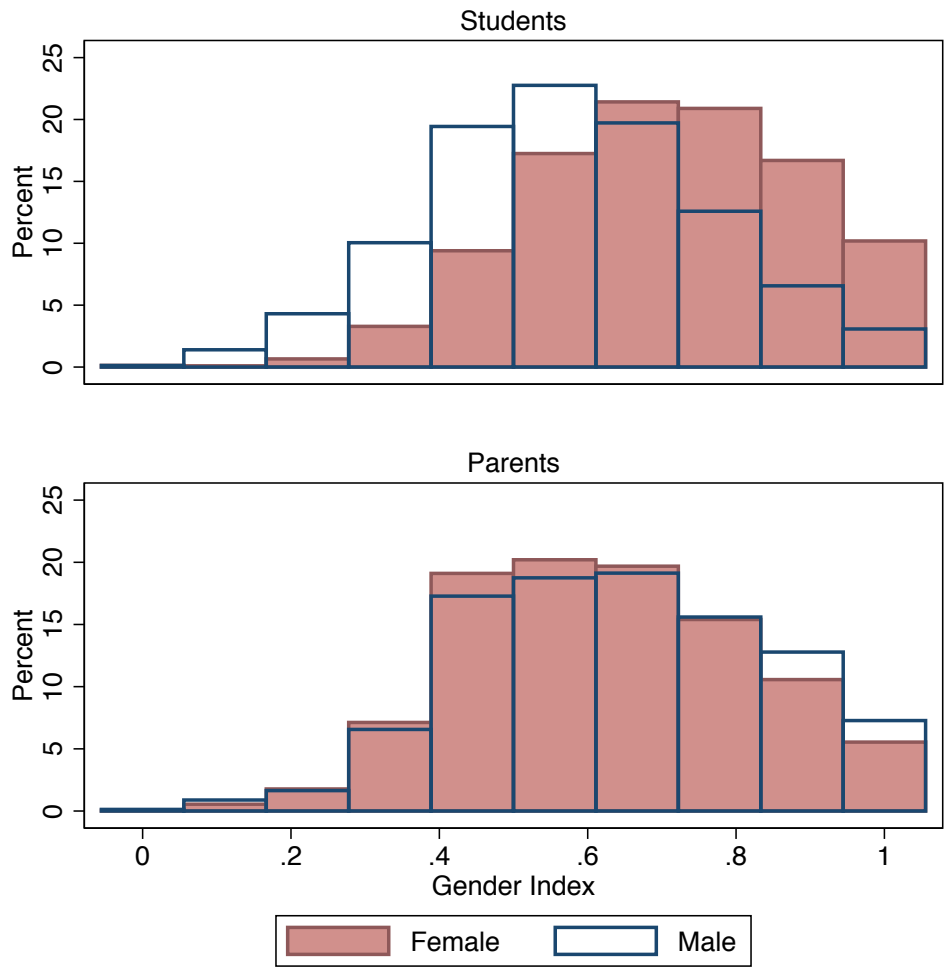


Table 1: Summary statistics

	Girls	Boys	Mothers	Fathers
Age	11.667 [1.247]	11.917 [1.257]	34.951 [5.595]	40.488 [6.750]
6th Grade	0.568 [0.495]	0.508 [0.500]	N/A	N/A
Illiterate	N/A	N/A	0.390 [0.488]	0.164 [0.371]
Finished primary	N/A	N/A	0.302 [0.459]	0.274 [0.446]
Finished secondary	N/A	N/A	0.202 [0.401]	0.270 [0.444]
Finished Class 10+	N/A	N/A	0.106 [0.308]	0.292 [0.455]
Hindu	0.945 [0.228]	0.947 [0.225]	0.940 [0.237]	0.953 [0.212]
Muslim	0.053 [0.223]	0.048 [0.214]	0.056 [0.231]	0.043 [0.203]
Scheduled caste	0.311 [0.463]	0.320 [0.467]	0.189 [0.392]	0.169 [0.375]
Scheduled tribe	0.000 [0.018]	0.002 [0.045]	0.010 [0.099]	0.011 [0.102]
Number of children	3.778 [1.293]	3.263 [1.227]	3.577 [1.306]	3.512 [1.266]
Percent sons among children	0.563 [0.299]	0.513 [0.356]	0.542 [0.325]	0.540 [0.328]
Mother is illiterate	0.344 [0.475]	0.372 [0.484]	N/A	N/A
Father is illiterate	0.134 [0.341]	0.157 [0.364]	N/A	N/A
Dwelling has flush toilet	0.165 [0.372]	0.123 [0.329]	0.148 [0.355]	0.145 [0.352]
Observations	3,044	2,439	3,104	2,379

Notes: Table reports variable means and standard deviations for girls, boys, mothers and fathers respectively. Only students specify their religion, so parents' religion is summarized based on students' answers.

Table 2: Questions used to construct gender index

	Fathers	Mothers	Boys	Girls
Disagree: A woman's most important role is being a good homemaker	0.267 [0.442]	0.287 [0.452]	0.209 [0.407]	0.430 [0.495]
Disagree: A man should have the final word about decisions in his home	0.439 [0.496]	0.412 [0.492]	0.328 [0.470]	0.513 [0.500]
Disagree: A woman should tolerate violence to keep her family together	0.456 [0.498]	0.361 [0.480]	0.610 [0.488]	0.667 [0.472]
Disagree: Wives should be less educated than their husbands	0.560 [0.497]	0.528 [0.499]	0.564 [0.496]	0.744 [0.436]
Disagree: Boys should get more opportunities/ resources for education	0.491 [0.500]	0.469 [0.499]	0.181 [0.385]	0.428 [0.495]
Men and women should get equal opportunities in all spheres of life	0.953 [0.211]	0.933 [0.251]	0.904 [0.295]	0.924 [0.265]
Girls should be allowed to study as far as they want	0.955 [0.207]	0.962 [0.192]	0.875 [0.331]	0.959 [0.198]
Daughters should have a similar right to inherited property as sons.	0.882 [0.323]	0.875 [0.331]	0.820 [0.385]	0.875 [0.331]
It would be a good idea to elect a woman as the village Sarpanch	0.779 [0.415]	0.805 [0.396]	0.692 [0.462]	0.810 [0.392]
Gender index	0.643 [0.201]	0.626 [0.192]	0.576 [0.192]	0.706 [0.182]
Gender pca	0.050 [1.493]	-0.050 [1.404]	-0.449 [1.339]	0.543 [1.401]
Wishes self/child to complete Class 13+	0.185 [0.388]	0.171 [0.376]	0.625 [0.484]	0.536 [0.499]
Discusses education goals with parents	N/A	N/A	0.845 [0.362]	0.795 [0.404]
Observations	2,379	3,104	2,439	3,044

Notes. Table reports variable means and standard deviations.

Table 3: Parent and child attitudes by gender

	Parent gender index (1)	Student gender index (2)	Student gender index (3)
Mother	-0.015*** [0.006]		
Girl		0.119*** [0.010]	0.114*** [0.010]
Propensity score to be a boy			-0.054** [0.021]
District-Grade, School FEs	Yes	Yes	Yes
Observations	5,483	5,483	5,483

Notes. Standard errors are clustered by school.

Table 4: Transmission of attitudes - Gender attitudes index

	Student gender index (1)	Student gender index (2)	Student gender index (3)	Student gender index (4)	Student gender index (5)	Student gender index (6)	Student gender index (7)	Student gender index (8)
Parent gender index	0.163*** [0.014]	0.159*** [0.015]	0.120*** [0.019]	0.120*** [0.021]	0.229*** [0.049]	0.186*** [0.050]	0.154** [0.073]	0.105 [0.076]
Mother*Parent gender index			0.080*** [0.025]	0.072*** [0.026]			0.111 [0.096]	0.125 [0.096]
Girl*Parent gender index					-0.081*** [0.027]	-0.054* [0.028]	-0.116*** [0.037]	-0.097** [0.040]
Mother*Girl							-0.026 [0.033]	-0.038 [0.035]
Mother*Girl*Parent gender index							0.062 [0.051]	0.078 [0.054]
Propensity score to be a boy					-0.048 [0.063]	-0.040 [0.065]	-0.181* [0.097]	-0.178* [0.100]
Propensity score to be a boy*Parent gender index					-0.057 [0.094]	0.003 [0.096]	0.052 [0.143]	0.142 [0.149]
Mother*Propensity score to be a boy							0.201 [0.126]	0.216* [0.125]
Mother*Propensity score to be a boy*Parent gender index							-0.135 [0.189]	-0.203 [0.187]
DGG, School FEs	No	Yes	No	Yes	No	Yes	No	Yes
Mother has no effect			0.000	0.000				
No effect on girls					0.000	0.002		
Dad/girl=Mom/girl							0.032	0.013
Observations	5,483	5,483	5,483	5,483	5,483	5,483	5,483	5,483

Notes. DGG fixed effects refers to district-grade-gender fixed effects. In columns (3), (4), (7), and (8), the main effect of Mother is not reported. Standard errors are clustered by school.

Table 5: Alternative measure of gender attitudes based on principal component analysis

	Student gender pca (1)	Student gender pca (2)	Student gender pca (3)	Student gender pca (4)	Student gender pca (5)	Student gender pca (6)	Student gender pca (7)	Student gender pca (8)
Parent gender pca	0.173*** [0.013]	0.164*** [0.014]	0.140*** [0.018]	0.136*** [0.020]	0.222*** [0.050]	0.174*** [0.052]	0.179** [0.072]	0.134* [0.075]
Mother*Parent gender pca			0.063*** [0.024]	0.054** [0.025]			0.062 [0.096]	0.058 [0.096]
Girl*Parent gender pca					-0.041 [0.027]	-0.029 [0.029]	-0.060 [0.037]	-0.060 [0.039]
Mother*Girl							0.039 [0.074]	0.022 [0.072]
Mother*Girl*Parent gender pca							0.034 [0.052]	0.057 [0.054]
Propensity score to be a boy					-0.624*** [0.141]	-0.298** [0.148]	-0.910*** [0.215]	-0.482** [0.215]
Propensity score to be a boy*Parent gender pca					-0.067 [0.094]	0.012 [0.098]	-0.019 [0.143]	0.076 [0.148]
Mother*Propensity score to be a boy							0.533* [0.282]	0.337 [0.279]
Mother*Propensity score to be a boy*Parent gender pca							-0.042 [0.187]	-0.078 [0.190]
DGG, School FEs	No	Yes	No	Yes	No	Yes	No	Yes
Mother has no effect			0.000	0.000				
No effect on girls					0.000	0.001		
Dad/girl=Mom/girl							0.254	0.182
Observations	5,483	5,483	5,483	5,483	5,483	5,483	5,483	5,483

Notes. In columns (3), (4), (7), and (8), the main effect of *Mother* is not reported. Standard errors are clustered by school.

Table 6: Comparing the influence of parents and peers

	Student gender index (1)	Student gender index (2)	Student gender index (3)	Student gender index (4)
Classmates' avg gender index	0.144** [0.057]	0.130** [0.057]	-0.070 [0.125]	0.240** [0.096]
Parent gender index		0.158*** [0.015]	0.196*** [0.050]	0.270*** [0.080]
Parent gender index * Girl			-0.053* [0.028]	
Classmates' avg gender index * Girl			0.040 [0.111]	
Parent gender index * Classmates' avg gender index				-0.175 [0.124]
Controls for prop. to be boy	No	No	Yes	No
District-Grade-Gender, School FEs	Yes	Yes	Yes	Yes
Observations	5,483	5,483	5,483	5,483

Notes. *Classmates' avg gender index* is the average gender index of the students of the same gender and age as the respondent in his or her school, and is calculated excluding the respondent's own gender index. Standard errors are clustered by school.

Table 7: Peer influence in coed versus single sex schools

	Student gender index (1)	Student gender index (2)	Student gender index (3)
Classmates' avg gender index	0.144** [0.057]	-0.197 [0.191]	-0.374 [0.282]
Classmates' avg gender index * Co-ed School		0.396** [0.201]	0.422 [0.280]
Classmates' avg gender index * Girl			0.001 [0.376]
Classmates' avg gender index * Co-ed School * Girl			0.006 [0.393]
Controls for prop. to be boy	No	No	Yes
District-Grade-Gender, School FEs	Yes	Yes	Yes
Observations	5,483	5,483	5,483

Notes. *Classmates' avg gender index* is the average gender index of the students of the same gender and age as the respondent in his or her school, and is calculated excluding the respondent's own gender index. Standard errors are clustered by school.

Table 8: Effect of parental attitudes on educational aspirations

	Wishes to complete Class 13+ (1)	Wishes to complete Class 13+ (2)	Wishes to complete Class 13+ (3)	Wishes to complete Class 13+ (4)	Discusses education goals with parents (5)	Discusses education goals with parents (6)	Discusses education goals with parents (7)	Discusses education goals with parents (8)
Parent gender index	0.126*** [0.037]	0.097* [0.057]	-0.015 [0.146]	0.032 [0.202]	0.020 [0.028]	-0.006 [0.041]	0.049 [0.108]	0.061 [0.165]
Mother*Parent gender index		0.056 [0.072]		-0.107 [0.275]		0.046 [0.053]		-0.034 [0.236]
Girl*Parent gender index			0.168** [0.079]	0.192* [0.114]			0.096 [0.064]	0.099 [0.094]
Mother*Girl*Parent gender index				-0.045 [0.144]				-0.005 [0.124]
Controls for prop. to be boy	No	No	Yes	Yes	No	No	Yes	Yes
DGG, School FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mother has no effect		0.001				0.277		
No effect on girls			0.208				0.090	
Dad/girl=Mom/girl				0.515				0.833
Observations	5,480	5,480	5,480	5,480	5,483	5,483	5,483	5,483

Notes: The main effect of *Mother* is not reported.

Table 9: Effect of peers on educational aspirations

	Wishes to complete Class 13+ (1)	Wishes to complete Class 13+ (2)	Wishes to complete Class 13+ (3)	Wishes to complete Class 13+ (4)	Wishes to complete Class 13+ (5)
Classmates' avg gender index	0.292** [0.130]	0.282** [0.129]	0.294 [0.283]	0.252* [0.129]	0.274** [0.129]
Parent gender index		0.124*** [0.037]	0.137 [0.243]	0.123*** [0.037]	0.127*** [0.036]
Parent gender index * Classmates' avg gender index			-0.020 [0.375]		
Classmates' avg desire to complete Class 13+				0.069 [0.059]	
Wishes child to complete Class 13+					0.083*** [0.019]
District-Grade-Gender, School FEs Observations	Yes 5,480	Yes 5,480	Yes 5,480	Yes 5,480	Yes 5,478

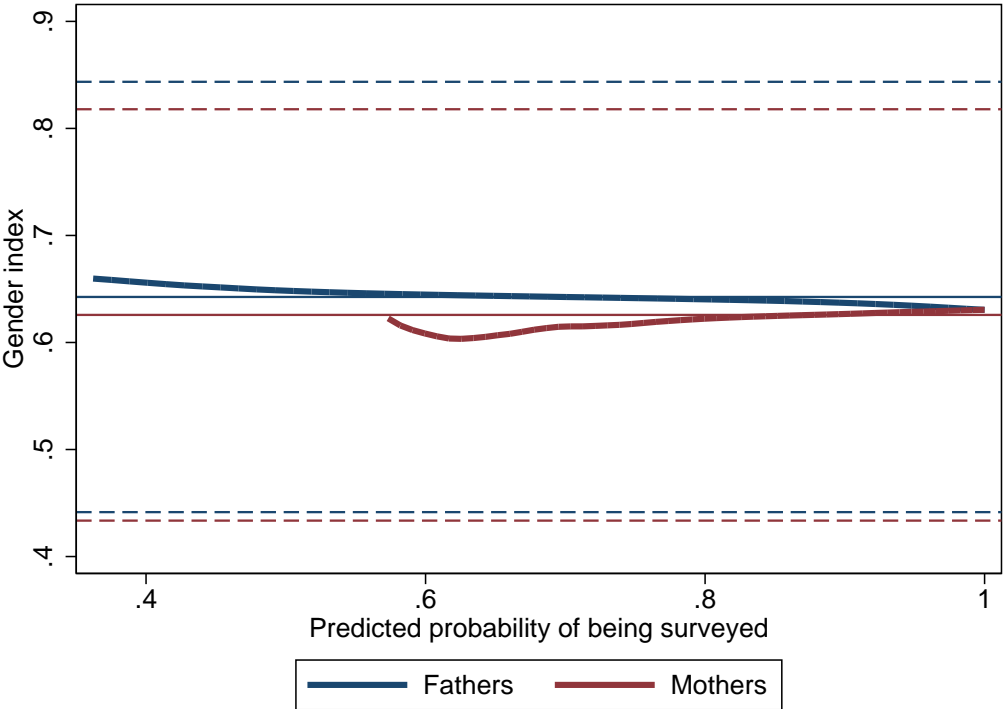
Notes. *Classmates' avg gender index* is the average gender index of the students of the same gender and age as the respondent in his or her school, and is calculated excluding the respondent's own gender index. Standard errors are clustered by school.

Table 10: Effect of peers on educational aspirations: Coed versus single sex schools

	Wishes to complete class 13+ (1)	Wishes to complete class 13+ (2)	Wishes to complete class 13+ (3)
Classmates' avg gender index	0.292** [0.130]	0.125 [0.435]	1.581** [0.719]
Classmates' avg gender index * Co-ed School		0.194 [0.455]	-0.657 [0.714]
Classmates' avg gender index * Girl			-1.722* [0.888]
Classmates' avg gender index * Co-ed School * Girl			1.696* [0.915]
Controls for prop. to be boy	No	No	Yes
District-Grade-Gender, School FEs	Yes	Yes	Yes
Observations	5,480	5,480	5,480

Notes. *Classmates' avg gender index* is the average gender index of the students of the same gender and age as the respondent in his or her school, and is calculated excluding the respondent's own gender index. Standard errors are clustered by school.

Appendix Figure 1: Is selection into the parent sample correlated with gender attitudes?



Notes: The heavy solid lines are a kernel regression of the gender index and a propensity score for completing the survey if selected for the survey. The light solid lines are the sample average gender index for men and women; dashed lines are displayed at one standard deviation above the mean and one standard deviation below the mean. As seen, the variation in gender attitudes based on the likelihood of being in the parent sample is small in magnitude.

Appendix Table 1: Robustness to controlling for school-grade-gender fixed effects and household wealth

	Student gender index (1)	Student gender index (2)	Student gender index (3)	Student gender index (4)	Student gender index (5)	Student gender index (6)	Student gender index (7)	Student gender index (8)
Parent gender index	0.148*** [0.017]	0.148*** [0.017]	0.098*** [0.023]	0.098*** [0.023]	0.191*** [0.058]	0.189*** [0.058]	0.118 [0.083]	0.115 [0.083]
Mother*Parent gender index			0.092*** [0.030]	0.093*** [0.029]			0.117 [0.109]	0.118 [0.109]
Girl*Parent gender index					-0.055 [0.034]	-0.055 [0.034]	-0.092** [0.045]	-0.091** [0.045]
Mother*Girl							-0.030 [0.040]	-0.029 [0.040]
Mother*Girl*Parent gender index							0.059 [0.062]	0.057 [0.062]
Propensity score to be a boy					-0.005 [0.074]	-0.007 [0.074]	-0.113 [0.109]	-0.116 [0.109]
Propensity score to be a boy*Parent gender index					-0.031 [0.110]	-0.024 [0.110]	0.059 [0.162]	0.066 [0.162]
Mother*Propensity score to be a boy							0.163 [0.138]	0.164 [0.138]
Mother*Propensity score to be a boy*Parent gender index							-0.113 [0.210]	-0.111 [0.210]
Wealth controls	No	Yes	No	Yes	No	Yes	No	Yes
School-Grade-Gender FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mother has no effect			0.000	0.000				
No effect on girls					0.007	0.008		
Dad/girl=Mom/girl							0.055	0.058
Observations	5,483	5,483	5,483	5,483	5,483	5,483	5,483	5,483

Notes. In columns (3), (4), (7), and (8), the main effect of *Mother* is not reported. Standard errors are clustered by school.