Changing Gender Norms

Contents

Foreword

This report comprises the results from a randomised control trial conducted by J-Pal South Asia, on Breakthrough's Taaron Ki Toli initiative, a school based gender equalisation programme in collaboration with the Department of Education, Government of Haryana.
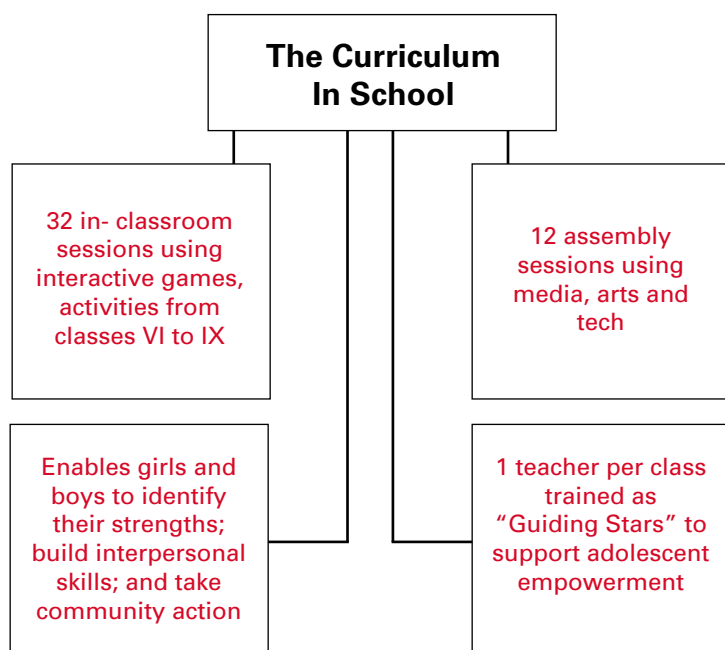
About Breakthrough's *Taaron Ki Toli* Programme

Children adopt the gender attitudes that they are exposed to at home, in school and in their communities; as they grow older, these take root and define their behaviour and responses as adults. In India, gender stereotyping starts early in adolescent girls' lives – they find themselves being undervalued, neglected and unloved in their own homes and communities. Restricted mobility, low priority for schooling, early marriage, all push them towards confining domestic roles as they reach adulthood. Boys on the other hand are expected to step out into the world, since masculinity demands and grants them the right.

Believing that an alternative narrative is possible, Breakthrough, a human rights organisation working to make violence against women and girls unacceptable, developed its Taaron ki Toli intervention. The intervention came from the belief that by addressing gender stereotypes early enough in a very structured, phased manner, young adults can themselves become social change actors in their own settings. This can create a snowball effect in their communities and build bridges with those outside of the school system, as well as address the problem at a community level. It improves the quality of their family lives: for example girls are better able to participate in decision making relating to their family or community.

Taaron ki Toli is a first of its kind, 3-year, school based programme that works with adolescent boys and girls in classes 6-9 to shape their gender attitudes and beliefs. The programme was introduced in 150 government schools in Haryana across the four districts of Jhajjar, Sonepat, Panipat and Rohtak in 2014 and reaches 18,000 children.

How the curriculum is structured:

The Curriculum In School

- 32 in- classroom sessions using interactive games, activities from classes VI to IX
- 12 assembly sessions using media, arts and tech
- Enables girls and boys to identify their strengths; build interpersonal skills; and take community action
- 1 teacher per class trained as "Guiding Stars" to support adolescent empowerment

Empowering adolescents

The Taaron ki Toli Curriculum is designed to develop and enhance psychological, interpersonal and social skills of adolescents. It aims to increase self-awareness and confidence by making them aware of their rights and entitlements. This allows them to think and communicate clearly and develop coping and self - management mechanisms, so that they can change unfavourable attitudes, and influence decisions related to their health, safety, education, careers and age of marriage.

The Curriculum provides a simple, effective and scalable model of tools and programmes. Young adolescents can not only practice in their homes, schools and communities to implement gender-equitable behaviour, but also be catalysts of change by drawing on the leadership training within the curriculum framework.

Summary of Evaluation Results

Using a randomised controlled trial, J-Pal found that the intervention improved gender attitudes by 0.2 standard deviations, an effect size comparable to that of having parents whose attitudes are one standard deviation more gender-equitable. Programme participants also report more gender-equitable behaviour such as increased interaction with the opposite sex. The change in attitudes is similar for boys and girls, but behaviour change is larger among boys, pointing to the importance of barriers for girls to act in accordance with their own altered attitudes.

Expansion and Scale up

Seeing the encouraging results from Haryana, Breakthrough has already scaled up this programme to Uttar Pradesh, Jharkhand and Bihar, reaching over 150,000 adolescents directly though the intervention. We intend on reaching over a million adolescents with this curriculum in next few years, with the hope of eventually creating a more gender neutral society.

List of figures and tables

Tables

Abbreviations and acronyms

1. J-PAL – Jameel Poverty Action Lab
2. IFMR – Institute for Financial Management and Research
3. SCERT – The State Council of Educational Research and Training
4. 3ie – International Initiative for Impact Evaluation
5. SSE – Sex Selective Elimination
6. DISE – District Information System for Education
7. IAT – Implicit Association Test

1. Introduction

Despite two decades of rapid economic growth and social transformation, outcomes for women in India are considerably worse than those for men (Jha et al. 2006). This pattern is evident in educational outcomes: While boys and girls have almost equal enrollment at the primary level and the start of secondary school, only 73 girls enroll in tertiary school for every 100 boys (World Bank 2010). Women tend to marry young and have children quickly, and face persistent barriers to mobility outside the home, labor force participation, and career development (Duflo 2012). Another troubling manifestation of gender bias is sex-selective abortion, infanticide and neglect. In 2011, the child sex ratio (age 0 to 6) for the state of Haryana was an alarming 830 girls per 1,000 boys, reflecting widespread elimination of female fetuses and new-borns as well as discrimination in providing nutrition and healthcare.

A large literature in economics and other fields examines reasons for observed gender differences in developing countries. These reasons include demand-side explanations focusing on the value of girls and women to parents and employers in the economic or social marketplace (Rosenzweig and Schultz, 1982; Qian, 2008; Jensen, 2012), as well as supply-side explanations such as differences in preferences, competitiveness and skills between women and men (Croson and Gneezy, 2009; Gneezy et al., 2009). While the empirical literature has documented that these explanations are important, accounting for these factors does not fully explain gender differences in outcomes. In addition, empirical studies find that financial incentives to alleviate gender differences, for instance in fertility behaviour, are largely ineffective.

Our study takes a new route. In contrast to models emphasizing economic costs and benefits of females versus males, we investigate the role of social attitudes, representing opinions, points of view or evaluations, in shaping differential outcomes for women. Gender equitable attitudes could shape women's outcomes, both in the short and long run, by decreasing the relative social costs of progressive behaviour. For example, an attitude that it is socially inappropriate for women to work outside the home will decrease a woman's workforce participation and earnings even when she is educated and potentially more productive than a man, and vice versa. The magnitude of social benefits versus costs might vary if discriminatory attitudes are reinforced or contrasted by the attitudes of parents, spouse or society as a whole. Insofar as these attitudes are deeply held and difficult to change through the provision of financial incentives, they may represent a significant challenge to erasing discrimination against women. At the same time, reforming basic attitudes through a targeted intervention early in life might produce long-term improvements in outcomes for women even when the intervention itself is withdrawn.

Within this context, we aimed to evaluate the effectiveness of an innovative school-based sensitsation programme aimed at promoting gender equality. The programme was designed and implemented by Breakthrough, a human-rights non-profit organisation with extensive experience using media, community engagement and training to change gender norms. The intervention engaged secondary-school students and teachers to change students' gender attitudes. Breakthrough's messaging covered a wide array of gender topics such as female education, women working outside the home, and reproductive choices. Their approach was to both make a human-rights case for gender equity as well as to underscore pragmatic reasons to value women, for example, their economic contributions.

There are several advantages of this approach compared to traditional economic incentives. First, adolescents are likely young enough to have malleable attitudes but old enough to think about these issues. Since attitudes are more stable post-adolescence, the effects of an attitude change programme could potentially sustain for a long time even after the end of the programme. In contrast, if financial incentives are the main motivation for gender-equitable behaviour, then the effects could potentially end once the incentives are withdrawn.

Second, the attitude-change programme is potentially more cost-effective compared to pecuniary incentives, since in scale-up, activities to encourage gender-equitable attitudes could be a regular part of a standard school curriculum, taught by regular teachers. Finally, an attitude-change programme might avoid problems of graft or gaming associated with financial incentives, especially conditional cash transfers

To the best of our knowledge, this study is the first rigorous examination of whether gender attitudes can be changed with a school-based intervention targeting adolescents. This is particularly important, since the existing literature has focused on adults. Prominent among these are Bertrand et al. (2015)'s research using US census data on the role of attitudes towards relative household earning by men and women, and the effect on the formation and dissolution of marriage. Jensen and Oster (2009) examine the role of messages spread through cable television, and show that attitudes become more egalitarian, and behaviour. For example, more pro-woman as a result. In similar vein, La Ferrara et al. (2012) show that the entry of soap operas in Brazil was associated with lower fertility, in part due to role model effects from small family sizes on television. In the political sphere, Gangadharan et al. (2016) argue that men have adverse behavioural reactions when experiencing female leaders, though Beaman et al. (2009) show that exposure changes attitudes towards women in leadership positions. Our school curriculum based approach might be relatively low cost and have long term effects fare beyond the adolescent years.

In addition, our study contributes to the literature on gender bias in developing countries. This literature has focused on the role of enabling technologies for sex bias, for example, the role of ultrasound machines (Bhalotra and Cochrane, 2010), as well as economic and cultural incentives for having daughters, for instance, the role of patrilineal land inheritance in generating parental bias against daughters (Bhalotra et al., 2016; Jain, 2014). In contrast, we study attitudes as the root cause of gender inequality.

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Within the education literature, this paper is related to work that uses schools to deliver information on topics beyond the traditional school curriculum (Dupas, 2011; Duflo et al., 2015), adding to the broader literature on the effects of changes to the content that students are taught in school (Abeberese et al., 2014; Duflo et al., 2011). We differ from most existing work in that the aim of changing the curriculum is to shape preferences and not just increase students' knowledge. Finally, our study is related to work that provides information on the returns to education, in our case, specifically girls' education (Jensen, 2010, 2012).

We conducted a randomised evaluation of the gender attitude change programme, with randomisation at the school level, using a sample of 314 government schools across Sonepat, Panipat, Rohtak and Jhajjar districts in Haryana. These districts feature some of the most skewed sex ratios in the country. The researchers had devised a detailed analysis plan in early November 2016 which pre-specifies the hypotheses, regression specifications as well as primary and secondary outcomes of the analyses, and the researchers have followed it while analysing the data. The pre-analysis plan is attached as an appendix to this report. This report aims to address all questions presented in the pre-analysis plan submitted.

The report is structured in the following manner: It first talks about the intervention, theory of change, the research hypotheses, the context in which the study took place, and its timeline. It then covers the evaluation design of the project along with the methods used in the evaluation of the programme as well as implementation of the intervention. Lastly, it covers a discussion on the impact analysis and results of some of the key evaluation questions, followed by concluding remarks.

2. Intervention, theory of change and research hypotheses

2.1 Intervention

The project emerged from discussions between J-PAL South Asia, Breakthrough and the Department of Education, Government of Haryana given government interest in testing programmes with adolescents in schools to help tackle challenges related to gender based discrimination in the state. The pilot programme, accompanied by a rigorous evaluation, aims to help make informed decisions for scaling it up across the state.

Breakthrough, a human rights organisation, developed an innovative gender–equitable attitude change programme targeting adolescent female and male students. The programme focused on adolescents since their attitudes and views are still malleable, yet they are on the cusp of making decisions related to career, marriage, reproductive health and fertility. Breakthrough implemented the two-and-a-half-year pilot programme (2014-2016) for cohorts from grades 7-9 in 150 government schools across four districts of Haryana. Through teacher training, interactive classroom sessions, youth clubs, school activities and a media and communications campaign, the programme aimed to create awareness of gender discrimination, change dominant gendered perceptions and promote gender equitable attitudes. By changing gender attitudes among youth, the programme aimed to influence a wide range of behaviours related to girls' education, mobility, marriage, work and fertility.

Breakthrough's programme involved working with education officials at the state, district and block levels, school principals and school teachers. Breakthrough oriented and gathered inputs from various education officials and school principals, and conducted multiple district-wise trainings of school teachers to sensitise and build their involvement and engagement with the programme. In consultation with school principals and teachers, they created an annual activity plan for each school to help embed the programme into the ongoing school curriculum and activities. In each school, Breakthrough created a youth club named "Taaron ki Toli" ("Cluster of Stars") where all intervention students were invited to enrol and sign pledges to declare their commitment to participate in club activities. In turn, students received an activity workbook and branded materials such as caps and badges with the club's insignia.

Trained Breakthrough facilitators visited the school once every 2-3 weeks and conducted 45-minute long sessions based on the curriculum developed by Breakthrough, using the workbook and other applied tools and exercises. The curriculum included topics such as gender identity, values, aspirations, goals, roles and stereotypes, recognition and tolerance towards discrimination and interpersonal skills such as public speaking, communication and social interaction between the sexes, negotiation, presentation, assertiveness, leadership, self-efficacy and trust-building. Through these topics, and interactive activities such as writing letters and stories, recording observations, street theatre, games, sports, video vans, short school campaigns and dialogue with families, students were made to explore gender identity and stereotypes, better understand gender inequities and their consequences, understand their rights and entitlements, and encouraged to communicate and act on what they had learnt.

2.2 Theory of Change

The main assumptions underlying this theory of change are:
- The programme inputs are delivered effectively by Breakthrough and result in increased awareness and understanding of gender equal behaviour and issues.
- Increased awareness and understanding of gender issues translates into attitudinal change and higher aspirations for girls, and participants improve communication skills to express their desires regarding gender-related decisions.
- Attitudinal change or higher aspirations or better communication skills among the youth lead to intermediate and sustained long term behaviour changes, in spite of entrenched norms and power structures. (Note: This is an important assumption which the evaluation aims to test both in the short run and long run through a variety of evaluation methods).
  - For example, girls might attend school more because they think it is more acceptable to be more educated than their husband (attitude change resulting in higher aspirations and changed behaviour) or because they can convince their parents to allow them to do it (better communication skills).
  - Youth and anyone also has constraints on acting in ways they desire. Thus, for attitude and aspirations to translate into behaviour, students must have enough autonomy over decisions or ability to persuade others to accept a behaviour. Thus, family and community attitudes and power serve as mediating factors in how attitude change translates into behaviour change.

Figure 1 Theory of change
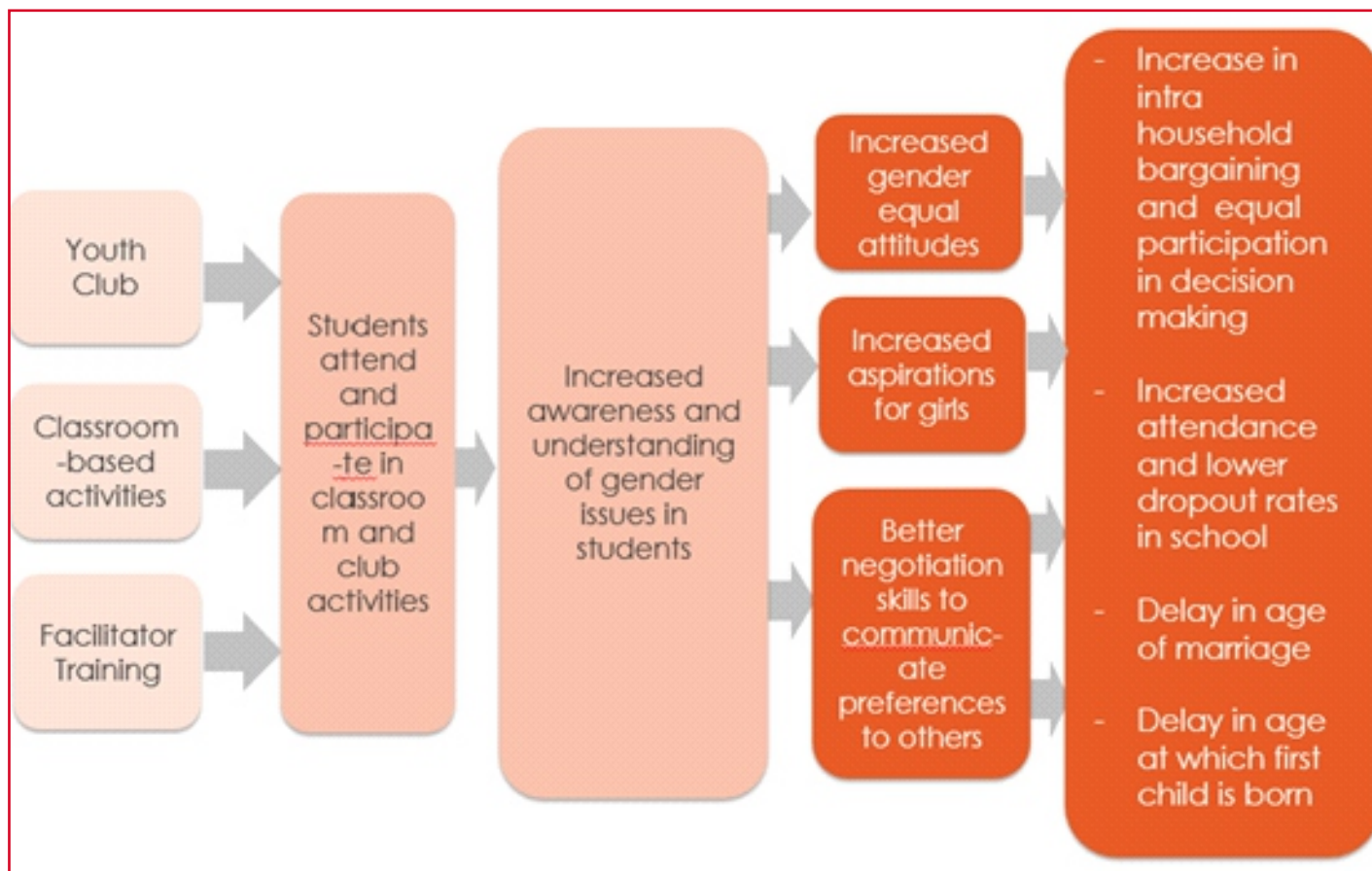
2.3 Research Hypotheses

Testing this approach of changing attitudes through a school-based programme as described above is important given that the stakes are high and recent government efforts, such as bans on sex selection or conditional cash transfers for having daughters, do not seem to work (Anukriti, 2017). Thus, an attitude-change intervention is promising because of the focus on adolescents rather than adults, long term sustained exposure, and potentially effective content and delivery given the partner organisation's experience in gender attitude change in India.

Our main research question is whether a gender attitude change programme can impact attitudes, educational and occupational aspirations, and gender-related behaviours, and if so by how much. To understand the mechanisms through which the impact happens, we analyze which gender attitudes are affected the most, and how the effects vary by student gender, parents' gender attitudes, and other characteristics.

3. Context

India is home to the world's largest population entering its reproductive years. This group's attitudes and choices about sex-selective abortion and, more generally, about the treatment of girls and women will determine whether India's skewed sex ratio and limited opportunities for women persist into the next generation. Youth are on the cusp of marrying and making fertility, health, and education decisions for their own children. At the same time, their viewpoints are malleable: Secondary school students are mature enough that they can discuss gender issues and are at a critical stage in the formation of moral character (Kohlberg 1976). Gender equity interventions aimed at this population have the potential to have a large impact on girls' educational attainment as well as their reproductive health decisions in the near future. Schools can serve as a valuable venue for delivering interventions to improve gender attitudes among this age group because one can reach many individuals simultaneously and on a regular basis over several years.

The project emerged from the Government of Haryana's interest in testing school-based programmes with adolescents to help tackle challenges related to gender based discrimination in the state. The study was conducted in four districts in Haryana: Sonepat, Panipat, Rohtak and Jhajjar. These districts feature some of the most skewed sex ratios in the country. The child sex ratio in Haryana was 0.834 girls per boy in the 2011 census, compared to 0.919 in India overall. The child sex ratio in Sonepat was 0.798, 0.837 in Panipat, 0.820 in Rohtak and 0.782 in Jhajjar.

Schools were selected for the study from a universe of 607 government run secondary schools that offered grades six through nine in the four districts. From these schools, we focused on 347 schools with medium to high enrollment based on DISE (2011) data, and with low dropout in enrollment between grades (as a proxy for attrition from the school). Finally a sample was chosen which consisted of 314 schools and 14,810 students at baseline survey[1], with 44 students from each school being surveyed. The students were enrolled in 6th and 7th grade during the baseline survey in 2013-2014 and were enrolled in 9th and 10th grades during the end-line survey in 2016-2017.

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[1] One treatment school was mistakenly not surveyed during baseline data collection. The school was then surveyed during endline.

Figure 2 Timeline of project activities
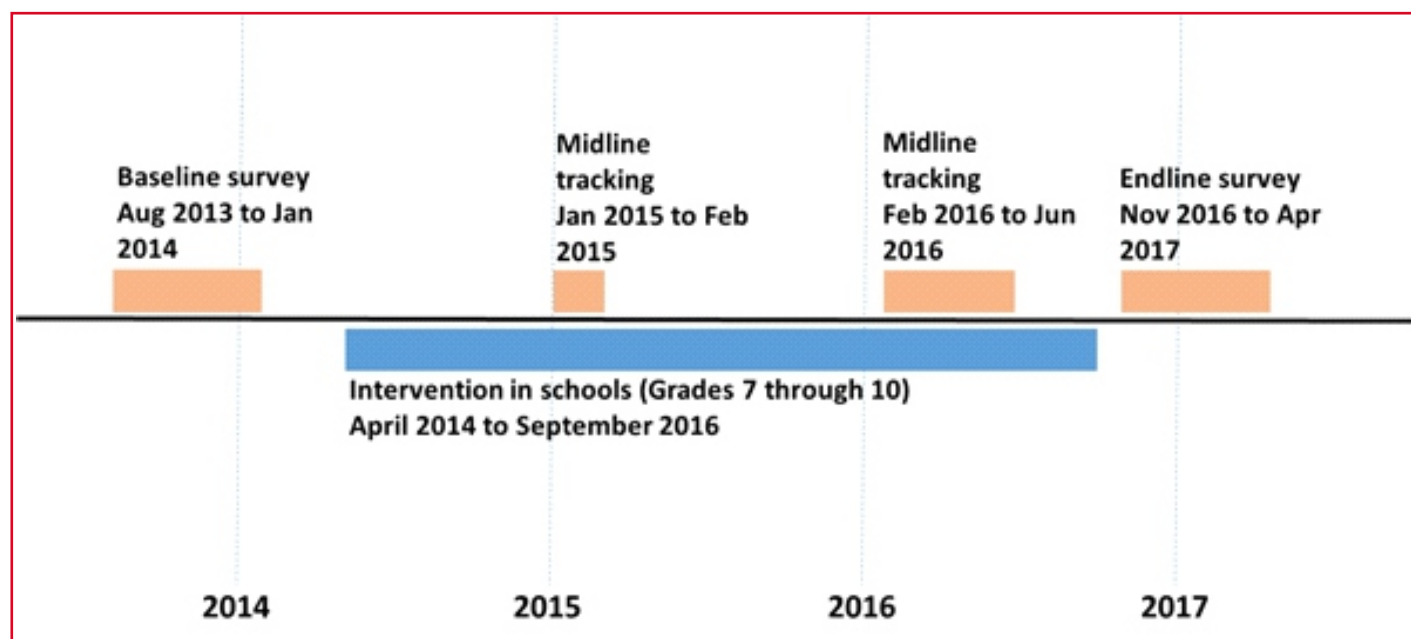
5.Evaluation: Design, methods and implementation

We conduct a randomised evaluation of the gender attitude change programme, with randomisation at the school level, using a sample of 314 government schools across Sonepat, Panipat, Rohtak and Jhajjar districts in Haryana. These districts feature some of the most skewed sex ratios in the country[2].

5.1 Power calculations

The sample size was determined both to measure the immediate impact of the programme on change in gender attitudes, aspirations and behaviour, as well as on long term outcomes such as school attendance, occupational choice, marriage and fertility. In particular, we expected that participants will be less likely to engage in sex-selective abortion when they start families. Therefore, the sample size was determined so that subsequent surveys could measure the impact on the sex ratio among the participants' children. Drawing on Beaman et al. (2009)'s finding that a female village head has a 0.1 standard deviation effect on gender attitudes, we assumed this programme will also have a 0.1 standard deviation effect on both gender attitudes and the sex ratio. This implied a change in the child sex ratio from 0.830 to 0.868 girls per boy, or a drop in the abortion of female foetuses from roughly 17% to 13.2%. To measure effects with 5% statistical significance with 80% power, with 44 children per school at baseline and a 10% attrition rate, the study required 296 schools. We added a small cushion in case some of our assumptions were too optimistic, yielding a sample size of 314 schools and 15,000 students that offered sufficient power to measure the impact both on gender attitudes immediately after the intervention and on the sex ratio in the long-term.

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[2]The child sex ratio in Haryana was 0.834 girls per boy in the 2011 census, compared to .919 in India overall. The child sex ratio in Sonepat was 0.798, 0.837 in Panipat, 0.820 in Rohtak and 0.782 in Jhajjar.

5.2 Sample selection

5.2.1 Quantitative Component

Schools were selected for the study from a universe of 607 government run secondary schools that offered grades six through nine in the four districts. From these schools, we focused on 347 schools with medium to high enrolment based on DISE (2011) data, and with low dropout in enrolment between grades (as a proxy for attrition from the school). In villages with multiple schools, only one school per village was randomly selected[3]. After initial visits, we excluded 33 schools because of chronically low actual attendance, despite high official enrolment, leaving 314 schools that form the sample used in this study. Of these, 59 schools enrol only girls and 40 schools enrol only boys, with the remaining 215 schools enrolling both boys and girls. Each school has an average of 84 students per grade[4]. Our focus on government schools implies that girls and students from poorer families disproportionately participate in the experiment as well as the survey sample. In Haryana, boys are more likely to attend private schools than are girls. At the same time, 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 in our sample). Setting a threshold enrolment for selection into the school sample implies that we miss small schools located in smaller villages. The table below provides the sample size at each stage of the project for quantitative component.

Table 1 Sample size for activities of the quantitative component

Activity (Project Stage)	Sample Size		
	Students	Parents	School Staff
Baseline	14810	5483	313
Midline Tracking 1	14588	-	-
Midline Tracking 2	13892	-	-
Endline	13989	-	314

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[3] If these schools were adjacent to each other or shared a building, we considered them a single school.

[4] 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.

5.2.2 Implementation

The implementation started in April 2014 and concluded in November 2016. All students attending grade 7 and grade 8 in the year 2014, grade 8 and grade 9 in year 2015 and grade 9 and grade 10 in year 2016 were considered a part of the programme. The table below provides the number of participants covered by Breakthrough during implementation stage of the project.

Table 2 Participants covered during program implementation

Activity (Project Stage)	Sample Size		
	Students	**Parents**	**School Staff**
Implementation of the school programme	18000	-	450

5.2.3 Qualitative component

Catalyst Management Services was our qualitative research partner both during baseline and endline. A total of 15 schools from four study districts were selected randomly during baseline for formative research. Similarly, a total of 12 schools were selected for qualitative surveys from four study districts. Out of these 12 schools, seven were from the treatment group and five were from control schools. CMS observed that they reached saturation in variation in responses during baseline and decided that conducting activities in 12 randomly schools would provide them with clear and detailed insights. The table below summarises the qualitative sample during baseline and endline.

Table 3 Sample size for qualitative component

Activity (Project Stage)	Sample Size		
	Students	**School Staff**	**Observation Checklist**
Qualitative study at baseline	359	15	15
Qualitative study at endline	379	11	-

5.3 Randomisation strategy

For a randomised evaluation, we compare the schools that receive the programme with those who do not. It is important that the two groups are balanced on observable characteristics. This makes them comparable and helps in attributing the effect of intervention to the programme itself. For this study, the unit of randomisation is a school, and the sample includes 150 treatment and 164 control schools (control to treatment ratio of 1.09). Figure 2 shows the location of the schools assigned to the treatment and control in the study districts. Table 1 shows baseline characteristics of schools assigned to treatment and control status. While we used a wider set of characteristics for balance, the first panel of Table 1 confirms that the two samples are balanced on co-ed status, location, as well as the number of male and female students by grade, and the number of teachers.
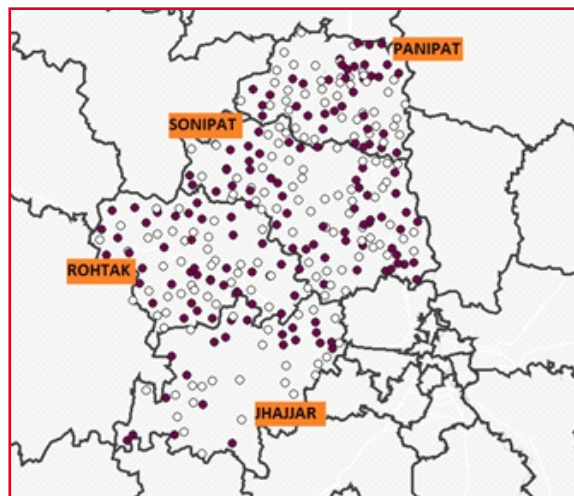

Figure 3 Study areas

Table 4 School's 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
Average number of male in 6th and 7th	53.912 [48.392]	52.995 [40.152]	0.021
Average number of female in 6th and 7th	66.709 [60.389]	63.078 [58.318]	0.061
Average number of male in 8th,9th and 10th	80.133 [65.607]	78.556 [60.103]	0.025
Average number of female in 8th,9th and 10th	101.698 [99.874]	95.196 [90.023]	0.069
Total number of teachers	17.766 [9.988]	17.173 [7.987]	0.066

Table 5 Student's characteristics at baseline

Variable	Treatment	Control	Standardized Diff
Number of students	7,052	7,758	
Student's age	11.833 [1.258]	11.854 [1.246]	-0.017
Female	0.565 [0.496]	0.543 [0.498]	0.044
Hindu	0.945 [0.227]	0.953 [0.211]	-0.037
Enrolled in grade 6	0.526 [0.499]	0.521 [0.500]	0.010
Enrolled in grade 7	0.474 [0.499]	0.479 [0.500]	-0.010
Scheduled caste	0.266 [0.421]	0.284 [0.432]	-0.042
Mother's age	35.183 [4.084]	35.247 [4.272]	-0.015
Father's age	40.251 [4.568]	40.294 [4.678]	-0.009
Mother is illiterate	0.369 [0.460]	0.374 [0.461]	-0.011
Mother works full-time	0.291 [0.445]	0.292 [0.446]	-0.002
Dwelling has flush toilet	0.155 [0.362]	0.131 [0.337]	0.069

5.4 Data collection

5.4.1 Piloting

Each survey instrument was piloted in non-sample schools from all the four study districts. We targeted students in grades 6 and 7 in 2013 and grades 9 and 10 in 2016 to conduct extensive piloting which ensured that each question was understood by the respondent and, the responses were relevant to the study objectives. We recorded the time taken to complete each section of the survey during the piloting to make sure we do not run into measurement errors due to respondent fatigue.

5.4.2 Baseline survey

5.4.2.1 Student survey

To select students within schools for the sample, we randomly chose among those whose parents gave 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. We surveyed more girls than boys because female enrollment is higher than male enrollment in government schools, as discussed below. We sampled more grade 6 girls than grade 7 girls because we expect lower attrition among them during our follow-up survey waves. An additional criterion was that the student attended

school on the survey day. Students with chronically low school attendance or whose parents did not consent to the survey are under-represented in the data. Surveyors interviewed students for approximately 35 minutes in school premises. Each survey included questions on demographic and family background of students, school attendance and participation as well as participation in household chores and activities, gender attitudes and gender behaviour. Table 5 summarizes key demographic variables for students in the sample at baseline. Baseline instrument is attached as a part of Annexure C to the report.

5.4.2.2 Parent survey

Parent attitudes and behaviour are the most proximate part of the social environment in which students form their attitudes. To understand parent attitudes, one parent of a random 40% subsample of the surveyed students participated in a survey at the student's home. 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 daytime hours when the survey was conducted. We surveyed a total of 2,379 fathers and 3,104 mothers. Both fathers and mothers answered questions on gender attitudes, their control of their child's behaviour, aspirations for their child (in education, occupation, marriage and fertility) and their own behaviour within the household (for instance, which spouse takes decisions on what to cook, how much to spend and whether to have a child or not). Table 4 summarizes key demographic variables for parents in the sample at baseline. Baseline instrument is attached as a part of Annexure C to the report.

Disclaimer: This picture was taken 4 years back during one community based program of Breakthrough and randomly selected for use in program IEC. Before taking any pictures BT announces that the pictures may be used for public domain with good intention and if anyone has objection to let us know.

5.4.2.3 School survey

School surveys were conducted with the headmasters or principals of sample schools to gather administrative data of the schools. We collected information like respondent details, type of school (rural, urban), number of teachers, number of students, existence and frequency of extra-curricular activities and observational questions on availability of various facilities in schools. Table 1 summarizes key variables from school survey at baseline. Baseline instrument is attached as a part of Annexure C to the report.

5.4.2.3 School survey

In order to mitigate social desirability bias when the students self-report their gender attitudes and behaviours, the researchers introduced specially designed psychological tests and questions designed to measure gender perceptions through the Implicit Association Test. The test was administered to ~50% of the total student sample and asked the students to associate images of boys and girls with good and bad characteristics. Screenshots of the baseline instrument is attached as a part of Annexure C to the report.

5.4.3 Midline survey 1

To ensure minimal sample attrition, we conducted the first midline survey in January 2015 through February 2015 to verify respondents' location and contact information. We were able to track 98.5% of our respondents through this survey. Midline 1 instrument is attached as a part of Annexure C to the report.

5.4.4 Midline survey 2

Similar to midline survey 1, we conducted the second midline survey in February 2016 through June 2016 yielding a 93.8% tracking rate. Similar information was collected in this wave as well. Midline 2 instrument is attached as a part of Annexure C to the report.

5.4.5 Endline survey

5.4.5.1 Student survey

The endline data collection commenced in November 2016, a month after the intervention ended, and concluded in April 2017. We were able to collect endline data on 94.16% of the baseline respondents. The endline survey was conducted primarily in the same school where the baseline was conducted (75.6% of endline respondents). A number of students had either moved to a different school, either in the same village or a different village, or dropped out of school entirely. These students were surveyed at home (24.3% of endline respondents). In case the student had moved to another village that was far from the survey districts and was difficult to track down in person, we conducted a truncated phone survey (0.11% of endline respondents). Endline instrument is attached as a part of Annexure C to the report.

5.4.5.2 School survey

Similar to baseline, school surveys were conducted with the headmasters or principals of sample schools to gather administrative data of the schools. Endline instrument is attached as a part of Annexure C to the report.

5.4.5.3 IAT survey

Similar to baseline, Implicit Association Tests were administered to ~50% of the total sample. However, this time we had two IATs. Half of the total IAT sample was asked to associate images of boys and girls with good and bad characteristics and the other half associated images of men and women to stereotypical jobs. Screenshots of Endline instrument is attached as a part of Annexure C to the report.

6. Programme or policy: Design, methods and implementation

Breakthrough, a human rights organisation, developed an innovative gender–equitable attitude change programme targeting adolescent female and male students. The programme focused on adolescents since their attitudes and views are still malleable, yet they are on the cusp of making decisions related to career, marriage, reproductive health and fertility. Breakthrough implemented the two-and-a-half-year pilot programme (2014-2016) for cohorts from grades 7-9 in 150 government schools across four districts of Haryana. Through teacher training, interactive classroom sessions, youth clubs, school activities and a media and communications campaign, the programme aimed to create awareness of gender discrimination, change dominant gendered perceptions and promote gender equitable attitudes. By changing gender attitudes among youth, the programme aimed to influence a wide range of

behaviours related to girls' education, mobility, marriage, work and fertility.By changing gender attitudes among youth, the programme aimed to influence a wide range of behaviours related to girls' education, mobility, marriage, work and fertility.

Breakthrough's programme involved working with education officials at the state, district and block levels, school principals and school teachers. Breakthrough oriented and gathered inputs from various education officials and school principals, and conducted multiple district-wise trainings of school teachers to sensitise and build their involvement and engagement with the programme. In consultation with school principals and teachers, they created an annual activity plan for each school to help embed the programme into the ongoing school curriculum and activities. In each school, Breakthrough created a youth club named "Taaron ki Toli" ("Cluster of Stars") where all intervention students were invited to enrol and sign pledges to declare their commitment to participate in club activities. In turn, students received an activity workbook and branded materials such as caps and badges with the club's insignia.

Trained Breakthrough facilitators visited the school once every 2-3 weeks and conducted 45-minute long sessions based on the curriculum developed by Breakthrough, using the workbook and other applied tools and exercises. The curriculum included topics such as gender identity, values, aspirations, goals, roles and stereotypes, recognition and tolerance towards discrimination and interpersonal skills such as public speaking, communication and social interaction between the sexes, negotiation, presentation, assertiveness, leadership, self-efficacy and trust-building. Through these topics, and interactive activities such as writing letters and stories, recording observations, street theatre, games, sports, video vans, short school campaigns and dialogue with families, students were made to explore gender identity and stereotypes, better understand gender inequities and their consequences, understand their rights and entitlements, and encouraged to communicate and act on what they had learnt.

7. Measuring gender attitudes, behaviours and aspirations

The study aims at assessing the impact of the intervention primarily on gender attitudes and behaviours and aspirations. Our survey instruments had multiple questions on each of these concepts and in order to consolidate the effect of the intervention on these outcomes, the researchers created three indices for each of these outcomes. The details of which are delineated in the sections below.

7.1 Attitudes

Attitudes are assessments of normative statements by the student. We followed a threefold approach to measure gender attitudes. This comprised of direct questions on gender roles, asked questions based on vignettes and questions on social and domestic norms. The questions from all of these approaches are aggregated into a gender attitude index. Children indicated their level of agreement/disagreement to a particular statement a scale of 1 to 5. The index is further divided into four mutually exclusive sub-indices viz. gender equality in education (edu), gender equality in employment (emp), willingness of females to obey others unquestioningly (sub), sex composition preferences (fert). The following questions form a part of this index.

➢ Wives should be less educated than their husbands (edu)

➢ It would be a good idea to elect a woman as the village Sarpanch (sub)

- Boys should be allowed to get more opportunities and resources for education than girls (edu)

- Education Vignette: If you were the head of the family whom would you have sent to the town for further studies? (edu) Note: This question is not on a five-point scale

- A man should have the final word about decisions in his home (sub)

- A woman should tolerate violence in order to keep her family together (sub)

- Parents should maintain stricter control over their daughters than their sons (sub)

- A woman's most important role is to take care of her home, feeding kids and cook for her family (emp)

- Men are better suited than women to work outside of the house (emp)

- Daughters should have a similar right to inherited property as sons (sub)

- A shy demeanour makes a boy a more suitable groom less A shy demeanour makes a girl a more suitable bride (sub)

- When a girl laughs, she should cover her mouth less When a boy laughs, he should cover his mouth (sub)

- Work Vignette: Marriage is more important for Pooja than her job (emp)

- Girls should attain higher education so that they find better husbands less Boys should attain higher education so that they find better wives (sub)

- At what age would you like your sister/female cousins/friends to get married less At what age would you like your brother/male cousins/friends to get married? (sub)

- Suppose the first 2 children born to a husband and wife are both girls. Which of the following should they do? less Suppose the first 2 children born to a husband and wife are both boys. Which of the following should they do? (fert)

- Do you think women should be allowed to work outside home? (emp)

Disclaimer: This picture was taken 4 years back during one community based program of Breakthrough and randomly selected for use in program IEC. Before taking any pictures BT announces that the pictures may be used for public domain with good intention and if anyone has objection to let us know.

7.2 Behaviour

The researchers hypothesize that the intervention increased gender-equitable behaviour among students in the treatment schools. That is whether the students' are more comfortable with and interact more with the opposite gender, girls' have more autonomy and engage in fewer traditional activities, boys engage is less gender-discriminatory actions and both genders encourage girls/women in their lives to have progressive actions/aspirations. The index is further divided into sub-indices viz. interaction with opposite sex, participation in household chores, decision making and mobility. The following questions forma part of this index:

1.Interaction with the opposite sex

➲ Are you comfortable talking to children of the opposite gender who are not related to you inside and outside school?

➲ Do you sit next to students of the opposite gender in class?

➲ How frequently have you been teased, whistled at or called names by someone of the opposite gender?

➲ Do the boys in your class ever do the following to the girls? (Various instances of harassment)

2.Participation in household chores

➲ In the past one week, did you… cook/clean/wash dishes, take care of young siblings/old people in the household, and went shopping for household provisions/paid bills?

➲ In the past month, have you missed school due to household based responsibilities?

3.Decision-making

➲ I am able to talk to my parents about what work I would like to do in the future

➲ Who mostly makes decisions about the following, or if this is in the future for you, who do you expect will make this decision- Will you make the decision, make the decision jointly with parents or will parents make the decision for you?

• Whether or not you will continue in school past 10th grade

• If you will work after you finish your studies

• What type of work you will do after you finish your studies

• What types of chores you do at home (for example, cooking, cleaning dishes, taking care of your siblings)

➲ During last week how many days were you absent from school?

4.Mobility

➲ Are you allowed to go to the school alone or with friends?

➲ Do you discourage your sister from working outside home?

➲ Do you discourage your sister from studying in college if it is far away?

7.3 Aspirations

Aspirations are statements about intended future behaviours. The researchers hypothesize that the Breakthrough programme positively impacts aspirations and intended behaviours among girls for further education, non-traditional occupations, etc. In order to measure aspirations, the instrument had direct questions on aspirations, especially girls, their plans for further education, and interest in non-traditional occupations. A number of questions (listed below) that capture aspirations of the children together form this index.

➲ How many marks, according to you, will you score in the SSE 10th board examinations?

➲ Have you ever discussed your education goals with your parents or adult relatives?

➲ Suppose you were to get married right after school, would you want to continue your education after marriage?

➲ What is the highest level of education you would like to complete if finances and opportunity of the school/college are available?

➲ What occupation do you expect to have when you are 25 years old?

8. Impact analysis and results of the key evaluation questions

The results suggest that the intervention increased gender attitude index by 0.2 standard deviations. The intervention also increased the gender behaviour index by 0.14 standard deviations. The change in attitudes is similar for boys and girls, but behaviour change is larger among boys, suggestive of barriers for girls to act in accordance with their own altered attitudes. The results indicate that aspirations did not increase significantly as a result of the intervention.

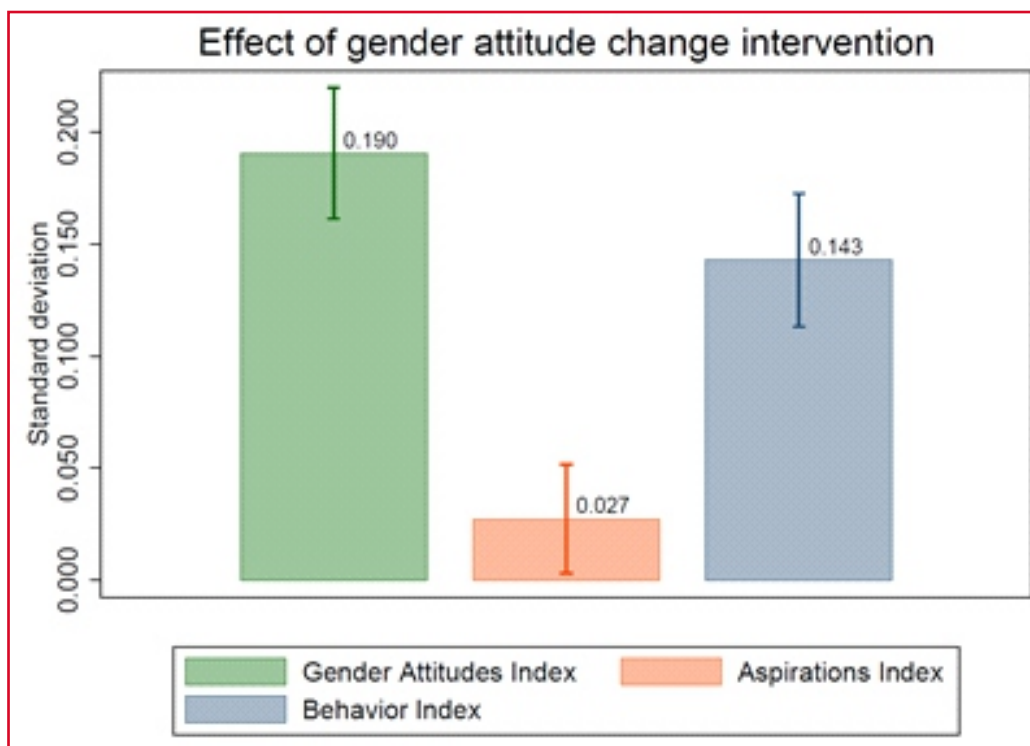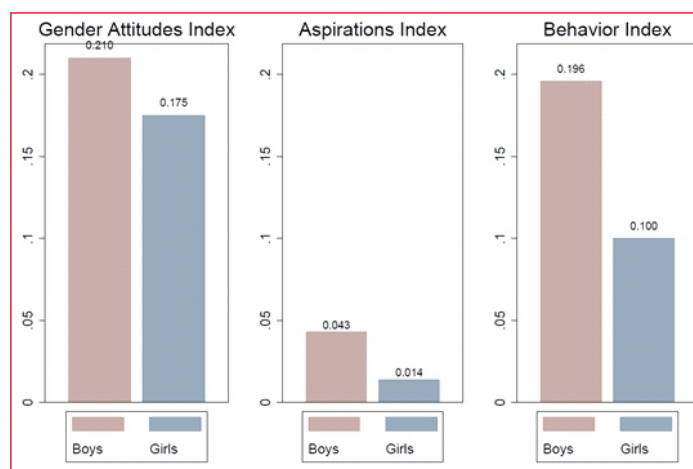## Figure 4 Effect of gender attitude change intervention

Figure 5 Effect of gender attitude change intervention by gender

Gender attitudes can also be impacted by other observable factors, such as being a female and parent gender attitudes. To put the impacts of the Breakthrough intervention in context, being a girl increases the gender attitudes index by 0.577 standard deviations, meaning the treatment effect is one third of the effect of the respondent's gender. The results also suggest that the intervention effects are comparable to the effect of growing up with parents with typical gender attitudes instead of parents with very gender-discriminatory attitudes (specifically attitudes that place them at the bottom 20% of all parents).

Figure 6 Benchmarking effect sizes

In-depth examination of attitudes reveal that the intervention has a significant positive effect on participants' attitudes towards paid employment outside the home. The intervention also makes the participants attitudes towards gender roles and attitudes more equitable. However, the effects on gender-equitable fertility behaviour are smaller, perhaps because such attitudes are difficult to change, or because school-age participants are too distant from their own child-bearing years to absorb messages on this topic. Further evaluation of behaviour index reveals that the intervention generated more interaction with the opposite sex and greater mobility for girls, but there is negligible impact

on gender-equal distribution of household chores or decision making. A potential reason for aforementioned behaviour could be because greater interaction and mobility are directly controlled by programme participants, but distribution of household tasks and other decisions are controlled by adult family members, which could make changing these behaviours difficult.
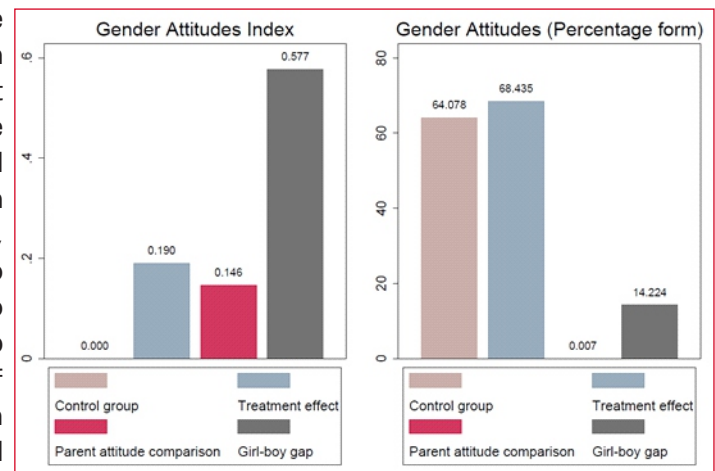
Figure 7 Effect of gender attitude change intervention on gender attitude sub-indices
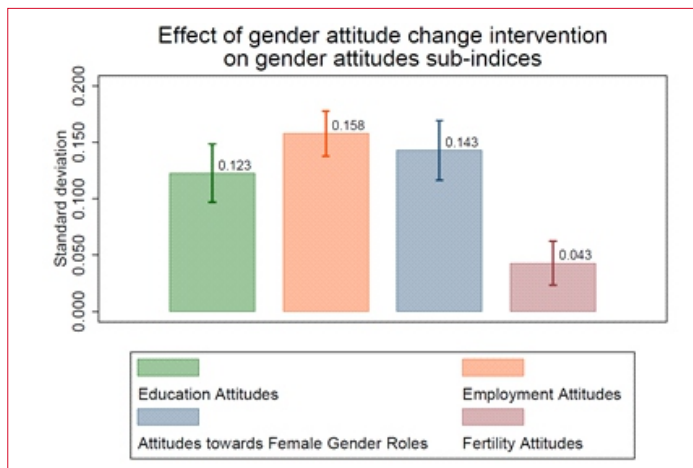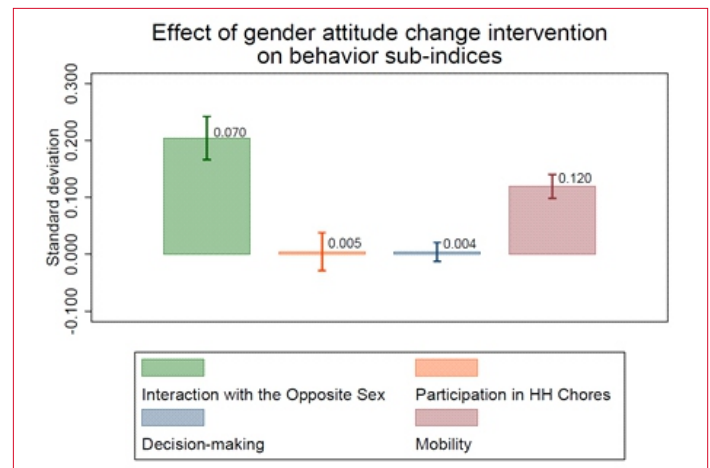

Figure 8 Effect of gender attitude change intervention on gender behaviour sub-indices

The research team did an additional analysis to also deduce impact in percentage points so that's its easily understandable to the larger audiences.

The results suggest that the intervention led to a 4 percentage point increase[5] on a gender attitude index, indicating a significant improvement in gender attitudes. The average score of programme participants on the gender attitudes index stood at 64 percent at baseline, where 100 percent stands for fully gender-equitable attitudes. The change in attitudes was similar for boys and girls.

➤ In-depth examination of attitudes reveals the following:
  • The intervention has a significant positive effect on participants' attitudes towards employment. Results suggest that the intervention led to a 7 percentage point increase[6] in attitude towards

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[5] This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The standard deviation of the gender attitudes index at baseline was 19.4 percentage points and the difference in means for girls and boys was 12.6 percentage points.

[6] This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The average score of program participants on the gender attitudes sub-index (employment) stood at 31 percent at baseline. The standard deviation at baseline was 46.3 percentage points and difference in means for girls and boys was 20.1 percentage points

women's paid employment outside the home.

- Intervention also increases attitude towards female gender roles by 3.6 percentage points[7].
- Results also found an increase in attitude towards education by 4 percentage points[8].
- However, the effects on attitudes towards gender-equitable fertility behaviour are smaller with an increase of 0.01 percentage points[9], perhaps because such attitudes are difficult to change, or because school-age participants are too distant from their own child-bearing years to absorb messages on this topic.

⊃ Programme participants also report more gender-equitable behaviour such as increased interaction with the opposite sex. Results found that the intervention led to a 3-percentage point increase[10] in the gender behaviour index, indicating a more progressive behaviour. The average score of programme participants on the gender behaviour index stood at 79 percent at baseline, where 100 percent stands for fully gender-equitable behaviour. The behaviour change was larger among boys, pointing to the importance of barriers for girls to act in accordance with their own altered attitudes.

⊃ Results also suggest that the intervention increased the aspirations index by 0.8 percentage points[11]. However, further analysis suggests that this increase is not significant.

9. Discussion

The attitude change could be sufficient to prompt behavioural changes in some areas like interaction with opposite sex as one can see in the results. However, it might be difficult for students to enact behavioural changes in other areas such as contributing to household chores and decision making. This could be because the adult family members/parents of the participants are the ultimate decision makers in these aspects and since the intervention does not target them, it might be difficult to change them. However, we expect the programme participants to depict more gender-equal behaviour when they become parents and decision makers in future. We plan to track this behaviour in the long-run. The theory of change/goal of the programme was not to have major behavioural change in the short run when the students are minors, not adults; the programme's main goal was to engender attitude change that might translate into major behavioural change in 5 or 10 or 15 years. Obviously those measures are beyond the scope of this grant and report, but are and have always been the overall goal of this research project.

Another point to note is that these findings should be read with caveats. First, just because we find strong effects of the intervention in this setting does not imply that the findings will readily extend to all places, populations or environments. The results of a similar intervention might be very different in places with more or less severe gender discrimination, which would have different gender attitudes at

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[7]This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The average score of program participants on the gender attitudes sub-index (female roles) stood at 66.8 percent at baseline. The standard deviation at baseline was 24.4 percentage points and difference in means for girls and boys was 10 percentage points

[8]This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The average score of program participants on the gender attitudes sub-index (education) stood at 49 percent at baseline. The standard deviation at baseline was 36.8 percentage points and difference in means for girls and boys was 21.6 percentage points

[9]This result is based on data collected from 13989 students who were a part of the study at endline.
[10]This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The standard deviation of the gender \ behaviour index at baseline was 14.9 percentage points and the difference in means for girls and boys was -1.6 percentage points.

[11]This result is based on data collected from 13989 students who were a part of the study at baseline as well as endline. The standard deviation of the gender aspirations index at baseline was 27.9 percentage points and the difference in means for girls and boys was -3.7 percentage points.

baseline. A priori, it is difficult to know whether more gender-egalitarian attitudes would facilitate or hinder programme adoption, or vice versa. In other environments, social conditions such as explicit restrictions between interactions between boys and girls might prevent programme participation and consequently attitude change. It is also possible that since the intervention is two and a half year long, if one instead tried this intervention in a context where the dropout rate is high (in contrast to the public schools where the intervention was conducted, and the dropout rate was low), students might have less exposure to the programme, so the effects would be smaller. In addition, enrolment in government secondary schools is high but not universal, so a programme based in secondary school does not reach the 17.86%[12] of students who have dropped out by then. In addition, in our case, the programme does not reach students in private schools. While we cannot say with our data whether the findings would generalize to private-school students, for scaling up the programme, if the government makes the curriculum mandatory and/or embeds it in textbooks, then in principle private school students could be reached.

Second, we do not take a strong view on which elements of the intervention are the most effective in changing attitudes or outcomes. Unpacking these elements requires variation in implementation, which was not this case in this experiment. However, learning the most effective parts of intervention might have important policy implications, and we leave that to future studies.

Third, the current analysis reports the short term, immediate impacts of the programme on gender attitudes, aspirations and behaviour. Equally interesting is whether the short run treatment effects might sustain in the long run, leading to changes in educational achievement, occupational choice, marriage and fertility even after the intervention has ended. Examining long term effects requires tracking the respondents into adulthood, and we leave that to future research as well.

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