# CASE STUDY 1: SHIFTING STUDENTS' GENDER ATTITUDES IN INDIA

Theory of Change & Measurement



Photo: Breakthrough India

This case study is based on: Dhar, Diva, Tarun Jain, and Seema Jayachandran. 2022. "Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India." *American Economic Review* 112, no. 3: 899-927.

J-PAL thanks the authors for allowing us to use their paper as a teaching tool.

| KEY VOCABULARY | |
|---|---|
| **Hypothesis**[1] | A proposed explanation for the effects of a given intervention. We can think of this as a claim to be tested. Hypotheses are intended to be made prior to the implementation of the intervention. E.g., *Giving textbooks to students will improve student learning.* |
| **Theory of Change** | A supposition made at the beginning of a program specifying steps in the pathways through which the intervention(s) could lead to an impact. A theory of change is a structured approach used in the design and evaluation of social programs. It maps the logical chain of how program inputs achieve changes in outcomes through activities and outputs. |
| **Assumption** | A precondition that underpins a theory of change or model. An assumption cannot be directly observed or verified. E.g., *When students read textbooks, they learn from them.* |
| **Input** | An activity carried out as part of a program or intervention. E.g., *Textbooks are given to schools.* |
| **Output** | A step in the planned implementation of a program or intervention – a.k.a. a direct result in response to the inputs. E.g., *Students receive textbooks through schools.* |
| **Intermediate outcomes** | Observable changes or impacts caused by the program that are not the ultimate outcome of interest, but necessary along the way to achieving a final outcome. E.g., *Increase in students who have passing test scores for the semester.* |
| **Final outcomes** | Changes or impacts that are of ultimate interest to researchers and/or program implementers; these are often the overall goals of a program. E.g., *Increase in high school graduation rates.* |
| **Indicator** | An observable metric used to measure an outcome. E.g., *Student test scores.* |
| **Instrument** | The tool used to measure an indicator. E.g., *A set of test questions.* |

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[1] These definitions of hypothesis and theory of change are based on those in Module 5.1: Theory of Change from Glennerster and Takavarasha's *Running Randomized Evaluations*.

## LEARNING OBJECTIVE

To better understand the conceptual framework of the theory of change and how it informs what research questions to ask, what data to collect, and what outcomes to measure.

## SUBJECTS COVERED

Theory of change, defining a hypothesis, selecting indicators, data collection, and measuring outcomes.

## INTRODUCTION

Despite progress in recent decades, gender inequality remains a global issue, with disparities being particularly pronounced in many low-income countries. Restrictive gender norms present a barrier for women and girls to access educational opportunities, participate in the labor force, and have full autonomy over life decisions. These gender gaps persist throughout life and contribute to stagnating social progress and economic development.

Increasingly, researchers are considering the role of cultural attitudes developed during adolescence in perpetuating gender inequality. Addressing gender norms at an early age may have an impact not only on adolescents throughout their life but also on their parents and future generations. Furthermore, including boys and men in programs aimed at changing attitudes about gender norms could be particularly impactful in the long run given existing gender-based power imbalances.

One recent policy approach is to engage adolescents in discussions around gender equality, gender roles, and gender-based discrimination. Integrating such programs into school curriculums may be particularly effective as this setting encourages peer interactions and facilitates consistent exposure to the relevant material. However, there is little evidence on whether direct approaches such as classroom discussions or indirect approaches such as assigned readings featuring empowered women are more effective at reshaping gender attitudes.

This case study will look at a program engaging secondary school students in classroom discussions about gender equality. Since gender attitudes, aspirations, and behaviors are internalized at an early age, the evaluation aimed to test whether interactive classroom discussions regarding gender roles can lead to short- and long-term impacts on perceived gender norms and positive gendered behavior for girls and boys.[2]

## THE INTERVENTION

According to a government census in 2011, the state of Haryana had the highest male-skewed sex ratio among all Indian states, with 861 girls for every 1,000 boys. Sparked by the Government of Haryana's interest in evaluating policies to reduce gender inequality, researchers partnered with Breakthrough, a human rights organization based in India that works to promote social change. Breakthrough designed and implemented a program called Taaron ki Toli (Legion of Stars) that aimed to promote gender equality among adolescents aged 11 to 15.

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[2] The case study focuses on boy and girl gender identities, while acknowledging that not all adolescents identify within this binary framework.

The program consisted of 45-minute classroom sessions held every three weeks for two and a half years. Sessions were led by Breakthrough facilitators and included discussions on gender identity, roles, stereotypes, and discrimination. For example, one session focused on household chores and others taught skills like communication. Outside of the classroom, students completed homework assignments, such as writing stories and discussing gender with family members, and were encouraged to engage in optional activities like Breakthrough clubs.

Together with Breakthrough, researchers conducted a randomized evaluation to measure the short- and medium-term impact of the program on adolescents' gender attitudes, aspirations, and behaviors. The study sample consisted of 314 government schools, with 150 schools randomly selected to receive the program in the treatment group and the remaining 164 schools serving as a comparison group. Researchers continue to monitor long-term outcomes of the program on educational attainment, occupational choice, marriage, and fertility.
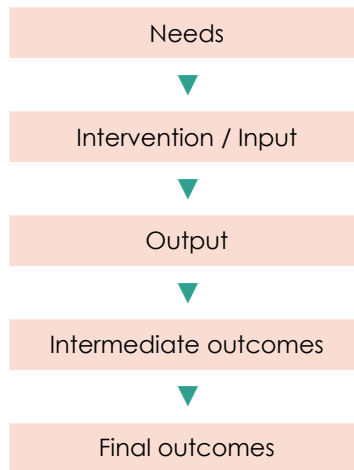
## DISCUSSION TOPIC 1: SITUATIONAL ANALYSIS AND PROGRAM DESIGN

1.1 What is the challenge the program is attempting to address? Discuss with your group potential goals that the Breakthrough team might have had in mind when designing the program.

1.2 What is a hypothesis that an impact evaluation of the program could test?

## DISCUSSION TOPIC 2: THEORY OF CHANGE

A theory of change (ToC) identifies the causal link between the intervention and the final outcome(s).

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        └─────────────────────────────┘
                      ▼
        ┌─────────────────────────────┐
        │     Intervention / Input     │
        └─────────────────────────────┘
                      ▼
        ┌─────────────────────────────┐
        │            Output           │
        └─────────────────────────────┘
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        ┌─────────────────────────────┐
        │     Intermediate outcomes    │
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        │        Final outcomes        │
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2.1 Using the following table, create a theory of change to map the causal pathway of the program.

2.2 What are the necessary conditions/assumptions underlying this theory of change? What needs to occur or be present for this chain to work? Enter the assumptions for each step in the following table.

| | NEEDS | INTERVENTION / INPUTS | OUTPUTS | INTERMEDIATE OUTCOMES | FINAL OUTCOMES |
|---|---|---|---|---|---|
| **THEORY OF CHANGE (Question 2.1)**<br><br>What happens at this step? | | | | | |
| **ASSUMPTIONS (Question 2.2)**<br><br>The conditions underlying each step of the theory of change. | | | | | |

| | NEEDS | INTERVENTION / INPUTS | OUTPUTS | INTERMEDIATE OUTCOMES | FINAL OUTCOMES |
|---|---|---|---|---|---|
| **MEASUREMENT: INDICATORS (Question 3.1)** Which indicators would you measure for each step of the theory of change? | | | | | |
| **DATA SOURCES (Question 3.1)** How would you collect data for indicators of interest? | | | | | |

## DISCUSSION TOPIC 3: MEASUREMENT

Defining a main hypothesis as well as program inputs, outputs, and outcomes at the beginning of an evaluation is a crucial step that will help you determine what data/information to collect. The ideal data collection plan measures indicators at every stage of the theory of change.

For each step, you must identify **indicators** (what to measure) and **instruments** (tools for data collection, a.k.a. methods for measurement). If possible, you should also collect data to validate the assumptions underpinning your theory of change.

For survey data in particular, it is important to consider participants' response process (i.e., how they interpret the survey questions) and how this and other factors may affect every step of measurement. For administrative data (such as school records), it is crucial to be able to link each data source to the unit of observation, which requires collecting data to match records.

3.1 Which indicators would you measure at each step of your theory of change, and how would you collect data for these indicators? Add indicators and data sources in the Measurement rows of the table under Discussion Topic 2.

3.2 What are potential validity issues that can arise out of measuring the construct of gender norms? Discuss this using outcome indicators identified through the theory of change exercise.

3.3 What are some of the ways in which systematic measurement errors may arise during program implementation and data collection? What mitigation strategies can be used to minimize these errors?

    a.   Questionnaire/survey design

b.  Response bias




    c.  Data collection method




3.4 Why and when would it be helpful to collect data from multiple sources? For which indicators do you think this would be the most relevant in this evaluation?




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**APPLICATIONS TO OTHER CONTEXTS**

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Gender bias and restrictive gender norms remain a key challenge worldwide, prompting communities to adopt different programs or policies designed to promote women's agency and advance gender equality, such as laws that protect women's rights, financial support to encourage investment in girls, and programs that target interventions and control of resources to women.

The main theory of change underpinning the Taaron ki Toli program is less researched than other common approaches but builds upon evidence that cultural norms—including gender attitudes—are amenable to change. Additionally, it incorporates insights that direct exposure to new ideas combined with active dialogue can effectively enact cultural change, particularly for adolescents. For instance, a program that organized development clubs to provide girls in Uganda with vocational and life skills training led to substantial advances in economic empowerment and autonomy (Bandiera et al., 2020).

The gender equity curriculum in this case study is scalable in its design to other settings with appropriate training and customization. Following the success of the program in Haryana, which increased gender-equitable attitudes by 0.18 standard deviations, the program has been scaled up through partnerships with different state governments in India. In 2021, the Government of Punjab's Department of School Education launched a partnership with Breakthrough and J-PAL South Asia to integrate the gender sensitization curriculum for all government schools in the state.

# REFERENCES AND FURTHER READING

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