Going Beyond School: An assessment of socio-emotional skills and MBIF Life Skills program
Monk Prayogshala (Sec 8) is a not-for-profit academic research institution based in Mumbai, India and registered under the Companies Act, 2013. It is also among the most trusted training institutions in the field of academic research in India.

Our research has been published in high-impact peer-reviewed Indian and international journals, such as Personality and Individual Differences, Economic and Political Weekly, Journal of Behavioral Economics for Policy, and Frontiers in Psychology to name a few.

Some of our collaborators in the nonprofit sector, where we help measure research impact and publish their work in high impact research journals:
School education is steadily rising in India, with enrollment levels for both boys and girls at an all-time high.
gross enrolment ratio, primary and lower secondary

As of 2019 according to UNESCO

For boys: 90.7
For girls: 93.3
However, we know little about the determinants of school attendance and how various socio-demographic and psychometric characteristics might explain a child’s decision to attend school.
This project seeks to broaden the understanding of factors affecting school attendance in light of Right to Education (RTE), and include gender attitudes, perceived self-efficacy, and resilience as potential determinants of an adolescent’s school-going behaviour.
Data is collected at 3 levels:

- **Baseline**: At the start of the program
- **Midline**: Approximately 18 months into the program
- **Endline**: Upon completion of the program
We focused on 12 projects across various locations between 2017 and 2019.
Baseline Results
Variables on which we have baseline data

Child socio demographics
- Age, sex, caste, religion, class

School outcomes
- Regularity of attending

Behavioural scales
- Perceived self-efficacy, resilience, gender attitudes, self-management, and problem-solving
Figure 1: Behavioural parameters distribution at baseline

- Perceived self-efficacy score: Mean = 19.86
- Resilience score: Mean = 30.65
- Gender attitudes score: Mean = 17.09
- Problem solving score: Mean = 20.21
- Decision-making scale: Mean = 12.25
- Self-management scale: Mean = 18.82
Figure 2: Behavioural parameters by class of education at baseline
Figure 3: Behavioural parameters by liking coming to school at baseline
Figure 4: Behavioural parameters by regularity of attending school at baseline
MODEL DEVELOPMENT

Multiple linear regression variable framework, identify triggers for change at baseline
\[ Y^*_{ihvst} = \alpha + \beta_1 Female_{ihv} + \beta_2 Scale_{ihv} + \beta_3 X_{ihv} + \varepsilon_{ihv} \]

\[ Scale_{ihv} = \gamma + \delta_1 Female_{ihv} + \delta_2 X_{ihv} + \eta_{ihv} \]

Where,

- \( Y^* \) is the underlying variable on regularity of attendance
- \( X \) is a vector of individual, household, and location-level characteristics such as age, sex, class of education, religion, caste
- \( \varepsilon \) is the error term
- \( Scale \) is the vector of socio-emotional skills (egalitarian gender attitudes, perceived self-efficacy, and resilience)

In an ordered logistic regression framework, this is the regularity of attending school that is an ordered variable for the \( i \)th child residing in the \( h \)th household in the \( v \)th study at the baseline study; Female is a dummy variable that takes a value of 1 if the child is female and zero otherwise. Scale is a vector of continuous variables that consist of total scores on the perceived self-efficacy, resilience, and gender attitudes scales.
Psychometric Measures

For a measure to be considered internally consistent, we need Cronbach's $\alpha > .7$

**Gender Attitudes**

This scale comprises 7 items assessing a child's gender attitudes along a 4-point Likert scale. Lower cumulative scores on the scale indicate more liberal gender attitudes, whereas higher scores are associated with conservative attitudes.

Cronbach's $\alpha = .75$ (n = 4143)

**Perceived Self-Efficacy**

This scale consists of 10 items along a 4-point Likert scale. The higher cumulative scores indicate higher perceived self-efficacy.

Cronbach's $\alpha = .89$ (n = 4144)

**Resilience**

This scale comprises 12 items along a 3-point Likert scale. The higher cumulative scores are associated with higher resilience.

Cronbach's $\alpha = .93$ (n = 4143)
Psychometric Measures

For a measure to be considered internally consistent, we need Cronbach's $\alpha > .7$

Self-management comprises 9 items along a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree); decision-making comprises 6 items along a 4-point scale.

Self-management Cronbach's $\alpha = .65$ (n = 4683)

Decision-making Cronbach's $\alpha = .70$ (n = 4683)

Problem solving

This scale is composed of 8 items along a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree).

Cronbach's $\alpha = .78$ (n = 4683)
Construct Validity of Psychometric Measures

Confirmatory Factor Analysis (CFA) was conducted using the R package lavaan (Rosseel, 2012) to assess one-factor models for the gender attitudes, self-perceived efficacy, problem-solving, and resilience scales.
Figure 5: Differences between boys and girls on behavioural parameters (socio-emotional skills) at baseline

$N = 6591$ for gender attitudes, self-efficacy, resilience; $N = 4677$ for problem-solving.
KEY FINDINGS

Socio-emotional skills enable school attendance, especially for girls.

Increased awareness and aspirations in the short-term

Behavioural parameters are boosted by the program and boost school attendance

Long-term impacts are powered by small sample, but strong
Socio-emotional skills enable school attendance, especially for girls.

- Socio-emotional skills (especially resilience) are important for enabling regular school attendance.
- Having good problem-solving skills improves the aspirations to study further as well as class participation.
Figure 6: Effects on Class Participation (Baseline)
Figure 7: Effects on Regularity of Attending School (Baseline)
Figure 8: Effects on like coming to school (Baseline)
PROGRAM EFFECTS
Figure 9: Differences in scale measures between baseline and midline
Increased awareness and aspirations in the short-term

- Robust effects of participating in the intervention on increased aspiration to study further and awareness of educational policies such as the RTE

- Girl children in the short-term on average see a 54.8% increase in odds of regularly attending school after participating in the program

Figure 10: Short-term program effects (baseline to midline)
Behavioural parameters are boosted by the program and boost school attendance

- Improvements in gender attitudes and resilience are particularly strong and positive for older children in the same cohort (> 11 years of age).

- The largest increase in egalitarian gender attitudes comes for female children who participated in the program, resulting in an 8.2% increase in their scores.

- Similarly, large increase (22.8%) on self-efficacy scores in the short-term on average.

Figure 11: Short-term program effects by group (baseline to midline)
Long-term impacts are powered by small sample, but strong

Figure 12: Long-term changes in scales (baseline to endline)
Long-term impacts are powered by small sample, but strong

- These effects are further ameliorated in the longer-term, with endline results suggesting that the program boosted egalitarian gender attitudes (23.5% increase over baseline scores) and self-efficacy (26% increase over baseline) substantially.

- With a larger sample (when endline data is available), this finding can be made more robust to inform future interventions.

Figure 13: Long-term program effects
Long-term impacts (NHKP Project Case Study)

Figure 14: NHKP effects on scales (endline)

Figure 15: NHKP effects on school outcomes (endline)
RECOMMENDATIONS
Program recommendations

Socio-emotional skills (especially resilience) are important for enabling regular school attendance. If a child (especially a female child) scored higher on resilience, then she was 25.8% more likely to be regularly attending school. Thus, targeting the development and improvement of such socio-emotional skills is an important aspect of the program.
DATA RECOMMENDATIONS

Panel identifiers
Replicate the process for ShubhAarambh data (child identifiers available across baseline and midline) for all ongoing studies.

Consistent scales
Survey instruments can be trimmed as well to do away with less valid or reliable scales, such as self-management.

Data recording
- Streamlining the data collection process.
- A standard questionnaire format across studies.