PROBLEM STATEMENT
Empowerment is an important goal in adolescent girl programming but remains elusive and unobserved from a quantitative measurement perspective.

GOALS AND METHODS
We conducted a statistical exercise to explore adolescent girl empowerment as a latent or underlying concept that, while not directly observed, may be illustrated through responses to questions on behaviours and attitudes asked in quantitative structured interviews. We use data from a randomised controlled trial that demonstrated impact in delaying girls' age at marriage in rural Bangladeshi communities with high prevalence of child marriage. The study collected extensive data on potential measures of voice, choice and agency before and after the intervention from a representative sample of adolescents living in communities randomly allocated to three intervention arms and a control. The analysis comprises a series of steps to identify how empowerment may be measured and how three different interventions to offer different types of skills affect those measures of empowerment. The skills offered in the three intervention arms are Arm 1: tutoring support in math and English; Arm 2: gender rights awareness; and Arm 3: livelihoods training. The steps are as follows:

- Identify a method of classifying girls according to latent classes that capture variation in empowerment;
- Explore how these measures are associated with background characteristics such as girls’ marital status, religious affiliation, household wealth, and parental education;
- Explore how empowerment is associated with different type of skills training offered by the intervention.

BALIKA AT A GLANCE
Three skills training programs offering gender rights awareness, tutoring support and livelihoods training to adolescent girls are tested using a rigorous research design.

- Qualitative and quantitative research over 18 months on a program involving 9,000 girls
- Baseline assessment in 2013: 11,609 girls aged 12–18
- Endline assessment in 2015: 9,982 girls from baseline (14.1% attrition for empowerment indicators)

Previous research documents significant impact on child marriage in all arms;[1] greater impact of interventions on time use, work, and learning outcomes in the gender arm.

MEASURING EMPOWERMENT
Our approach to measurement follows two basic principles: first, the variable should conform to universally acceptable notions like freedom of movement and expression, freedom from coercion.
and violence, and basic principles of human rights and dignity; second, measures of these indicators are culturally and contextually relevant.

Our measures of empowerment may be clustered into seven conceptual measures and captured by multiple indicators that measure different dimensions of the overall conceptual measure. Seven binary indicators of respondents’ mobility are based on respondents’ reporting about their access to the following locations: 1) school, 2) an adolescent center or non-governmental organization, 3) the library, 4) playground, 5) friend’s house, 6) the market, and 7) the bank.

Two binary indicators of respondents’ social support are based on: 1) whether respondents had access to a non-family mentor for advice and 2) whether respondents had an accessible network of friends.

Three indicators of respondents’ participation in society are based on: 1) whether respondents were affiliated with a group in the community, 2) whether respondents actively participated in sports, and 3) whether respondents reported playing outdoors.

Two indicators of respondents’ freedom from domination by the family are measured by: 1) whether they were able to socialize with people from other religions without family restrictions, and 2) whether they felt they could disagree with their parents regarding decisions affecting them.

Five indicators of respondents’ access to information are measured by: 1) whether they read the newspaper in the past week, 2) whether they watched television in the past week, 3) whether they listened to the radio in the past week, 4) whether they owned a mobile phone, and 5) whether they knew how to use a computer.

Seven indicators of respondents’ attitudes towards traditional gender roles are measured by whether they disagreed with the following seven statements:

1. “A woman should always obey her husband.”
2. “A father is not responsible for feeding his baby.”
3. “A woman’s most important role is to take care of her home and cook for her family.”
4. “Women should not have the right to divorce.”
5. “It is a woman’s responsibility to avoid getting pregnant.”

6. “A man should have the final say in all family matters.”
7. “Men should not share the work around the house with women.”

Four indicators of respondents’ attitudes towards violence are measured by whether they disagreed with the following four statements:

1. “There are times when a woman deserves to be beaten.”
2. “A woman should tolerate violence in order to keep her family together.”
3. “If someone insults a man, he should defend reputation, with force if he has to.”
4. “To be a man, you need to be tough.”

FOUR LATENT CLASSES OF EMPOWERMENT

Distinct classes of empowerment emerged among the sample.

• The least empowered class had the highest restrictions on mobility, few supportive networks, and the least voice and ability to negotiate with parents/family on decisions affecting them. They hold the least egalitarian views on gender roles and are the most accepting of physical violence.

• The second group of mobile, socially active class were more likely to play team sports or outdoor games, were more able to go places (library, playground, market, and friends’ homes) and had a network of friends and mentors. Although they reported lower access to sources of information, they were the most likely to have recently watched television. Like girls in the least empowered class, they also hold the least egalitarian views on gender roles and are the most accepting of physical violence.

• The socially progressive class have more egalitarian views on gender roles within the household and are less accepting of physical violence than girls in the least empowered or the mobile, socially active classes. Similar to their peers in the least empowered class, girls in this class are characterized by low levels of mobility, access to information, and group participation.
The most empowered class emerged at endline whereas at baseline there were only three classes. Girls in this group have the most egalitarian views on gender norms and are the most condemning of violence. Similar to girls in the mobile, socially active class, members of this class enjoy high freedom of movement; compared to all other respondents, they are the most likely to have access to the bank, market, and library. Members of this group are largely free from domination by the family. They are also the most likely to know how to use a computer and to have recently consumed traditional media (radio, newspaper, or television).

**PREDICTORS OF LATENT CLASS MEMBERSHIP**

Next, we assessed how these classes or clusters before and after the interventions are associated with background characteristics of girls such as their age, marital status, household wealth, parental education and religious background. We find that before skills development opportunities were offered to the villages, a number of background characteristics were strongly associated with the classification of girls according to these latent classes. Most notably, household wealth and parental education were strongly associated with being in a more empowered class—the least empowered girls were also the poorest girls and most likely to be married. After the intervention (at endline) the classification of girls into latent classes changed and wealth was no longer a significant predictor of more empowered responses. Thus, these interventions seem to be an equalizer in terms of “doing away” with wealth advantages. There is also a new emergent class of girls who are mobile, socially active and hold progressive values—a combination of characteristics of empowerment that was not evident at baseline.

Education both of parents and girls continued to be an importantly associated with empowerment classes. Girls who are married at young ages and have never attended school appear to not benefit from the program and continue to give responses that indicate low levels of empowerment.

There were some observable differences in empowerment impact by arm. The most notable difference was there was a statistically significant impact and girls were more likely to be in the most empowered category in the gender and education arms. These effects were not statistically significant in the
livelihood arm. Overall the results suggest there is value in convening girls and creating opportunities for social interaction and learning. The analysis also suggests that there are important initial differences among girls that are important to take into account.

**IMPLICATIONS FOR PROGRAMMING**

Program impacts on empowerment of young adolescents may have worked in several ways.

- At endline, wealth is no longer a significant predictor of empowerment classification suggesting that the program diminished some of the advantage of wealth. In this sense, the program is an equalizer.
- The overall proportion of girls who are in the least empowered group diminished from 32% to 17% suggesting a general improvement of overall empowerment for them.
- The endline differs from the baseline in the emergence of a new class of girls who have attributes that combine social empowerment with more progressive values, in a manner that did not exist at baseline when they were either socially mobile or held progressive values but not both. Since programs increased exposure to more gender equitable values in their program content as well as providing opportunities to forge new social networks and relationships in a safe and protected environment we can confidently conclude that the emergence of a new type of empowerment that allows girls to be both social and progressive may be attributable to the program. Further, the gender arm has a stronger emphasis on the development of soft skills such as negotiation and critical thinking that can explain the stronger relative impact of the gender arm. While the education arm did not have the same emphasis on soft skills, tutoring in mathematics and English language skills that are important for keeping girls in school may have boosted self-confidence and inculcated more progressive values among young adolescents.