

# **Pre-Analysis Plan for “Skills Training for Youth”**

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## 1. Introduction

We evaluate the impact of Save the Children’s Skills to Succeed (S2S) program on youth (ages 15-24) who have dropped out of school. This pre-analysis plan outlines the hypotheses to be tested and specifications to be used in the analysis of the impact of the S2S program in the slums of Dhaka, Bangladesh. This plan was completed before conducting any analysis using the endline data and can thus serve as a useful reference in evaluating the results of the study.

## 2. Overview of Study

In this pre-analysis plan, we specify the hypotheses to be tested and specifications to be used for analysis of the in-person endline survey. This survey will take place in Dhaka between July and September 2022. Using this endline survey data, we estimate the effect of the S2S program on the participants’ labor market outcomes, sense of agency, motivation and transferable life skills, among others. The randomization structure of the program treatment allows us to causally identify these effects. In addition to these direct effects, the study examines potential wider labor market effects, and spillovers within the participants’ households. The study also incorporates a component meant to promote gender parity meant to improve gender equality in the workforce.

The study conducted a randomized control trial consisting of three arms:

- 1) Youth participating in the S2S program
- 2) Youth participating in the S2S who also receive a gender intervention
- 3) A control group of youth to serve as a counterfactual

The study sample consists of individuals that were identified as being between the ages of 15 and 24, who had dropped out of school, and living in the Dhaka slums. Treatment participants were from the 9<sup>th</sup> and 10<sup>th</sup> cohorts of the S2S program. 1,350 youth were trained in employability skills through S2S (696 male; 654 female), and 1,960 were trained in vocational skills (1,498 male; 968 female). Additionally, 592 students (304 male; 288 female) and 300 parents (61 male; 239 female) received the additional gender intervention. We aim to reach 489 youth to act as a control.

## 3. Data

The primary source of data is baseline and endline surveys of individuals. Baseline data was collected on individuals interested in participating in the S2S program, but before randomization. Endline data was collected after the completion of the participant’s chosen program. A timeline of the data collection is below.

<b>Activity</b>	<b>Dates</b>
Enumerator Training	January 27-29, 2020
9 <sup>th</sup> Cohort Baseline Data Collection	January 30-February 8, 2020

COVID Training Pause	March 18-September, 2020
10 <sup>th</sup> Cohort Baseline Data Collection	January 17-January 28, 2021
Midline Data Collection	October 14-November 18, 2021
Phase 1 Endline Data Collection	September 4-October 8, 2022
Phase 2 Endline Data Collection	October 9-December 15 (anticipated), 2022

#### 4. Measurement of key variables

The next sections detail the primary and secondary outcomes. In case we construct an index, we always show the index as the main outcome variable, while also displaying all subcomponents of the index.

##### 4.1 Primary Outcomes

Below is a description of our primary outcomes

Outcome	Indicator	Question	Coding		Index
Job placement	Being employed	Are you involved with any income generating activity? That is, are you currently working for money? (If anyone works for benefits only, that will also be included here).	Dummy equals one if “Yes”	2.1	Added together and normalized
	Business entry/has business	Which of the following describes your situation on the job?	Dummy equals one if “Self-employed”	2.14	
Income	Labor income	How much did you earn from this activity in the last month in taka?		2.17	Each variable normalized, summed, and renormalized.
	Other benefits	What value in taka would you place on all the non-monetary benefits you receive (e.g. food, housing, healthcare, other support)?		2.18	
	Business income	In the last 4 weeks, what were your profits from this business? By profits, I mean your total revenue from this business? By profits, I mean your total revenue from this activity minus the expenses required to earn this revenue.		2.16	

Decent work	Formal employment	Is your work formal (registered with the government for taxation or entitlement purposes) or informal?	Dummy equals one if “Formal”	2.12	
	Permanent work	Which of the following best describes your situation on the job?	Dummy equals one if “Permanent employee with contract and benefits”	2.14	
	Permanent work	Is your business a permanent, seasonal, or short-term job?	Dummy equals one if “Permanent”	2.27	
	Working hours	How many hours per day did you spend on this activity in the last month, and how many days in the month?		2.19	
	Job satisfaction	Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. The top of the ladder represents the best possible employment situation for you and the bottom of the ladder represents the worst possible employment situation for you. On which step of the ladder would you say you personally feel you stand at this time?	Normalized scale ascending from 0-1	2.33	
Gender equality at work	Same pay	Women should be paid the same as men for doing the same work	Normalized scale ascending from 0-1	5.7	
Financial security / certainty	Financial independence	Which of the following best describes your current situation?	Dummy equals one if “I alone support myself financially”	2.31	Added together and renormalized
	Economic certainty	How easily can you predict your earnings on a monthly basis?	Dummy equals one if “Somewhat easily” or “Very easily”	2.30	

	Maintain living standard	With your salary or income or support from your family, how confident are you that you will maintain your living standards next month?	Normalized scale ascending from 0-1	2.32	
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#### 4.2 Secondary outcomes

Outcome	Indicator	Question	Coding		Index
Motivation to find decent work	Interest in ICT	How interested are you in working in the Information and Communications Technology Sector?	Normalized scale ascending from 0-1	1.8	Added together and renormalized
	Steady job	In general, do you want to find a steady job in the long term?	Dummy equals one if "Yes"	2.24	
	Motivation	I will keep searching until I find a steady job.	Normalized scale ascending from 0-1	5.2	
	Confidence in job search	I have the skills I need for a well-paying, steady job.	Normalized scale ascending from 0-1	4.25	
Additional business outcomes	Type of business	What does your business do?		2.26	
	Number of employees	How many employees have worked for you in the last 4 weeks at this business?		2.29	
	Business separate from household	Does your business have a formal/permanent location that is the same as your house?	Dummy equals one if "No, it has a formal/permanent location different from my house"	2.28	
Economic status / activities	Type of work	In which sector are you currently working?		2.11	
	Number of IGAs	How many income generating activities are you currently involved in?		2.10	

	Job retention / barrier to be employed	Are you involved with any income generating activity? That is, are you currently working for money? or Why did you not apply for any jobs? or Why did you not accept the job offer?	Multiple options	2.1, 2.5, 2.9	
Household income	Other contributors	How many people over the age of 18, besides yourself, are contributing income or food to the household?		2.34	
	Other contributors	How many people aged 5-18 contribute to your household's income?		2.35	
	Total household income	Total household income	Normalized	2.36	
Employability assessment tool	Positive self-concept	I feel valued and appreciated by others.		4.1	Added together and renormalized
	Positive self-concept	I feel good about my future.		4.2	
	Positive self-concept	I anticipate my own needs ahead of time.		4.3	
	Positive self-concept	I can adapt to changes by learning new skills.		4.4	
	Self-control	I'm able to complete assignments in time.		4.5	Added together and renormalize
	Self-control	I go to work even when I feel like staying at home.		4.6	
	Self-control	I feel proud when I produce high quality work.		4.7	
	Self-control	I follow workplace or school dress codes.		4.8	
	Social skills	I accept people who are different than me.		4.9	Added together and renormalized
	Social skills	I can understand and work with people of different backgrounds.		4.10	
	Social skills	I value the input and contributions of others.		4.11	

	Social skills	I take responsibility for what I do.		4.12	
	Communication skills	I know how to express myself in proper ways.		4.13	Added together and renormalized
	Communication skills	I know how to articulate my own ideas clearly.		4.14	
	Communication skills	I read so I can comprehend and use new information.		4.15	
	Communication skills	I listen actively to understand and learn.		4.16	
	Problem solving-skills	I collect, analyze, and organize information to find the best solution to a problem.		4.17	Added together and renormalize
	Problem solving-skills	I learn from my past successes and mistakes to make future decisions.		4.18	
	Problem solving-skills	I seek many sources of information to solve a problem in school or at work.		4.19	
	Problem solving-skills	I can adapt to changing circumstances		4.20	
	Job search skills	I have the knowledge and skills needed to interview for jobs.		4.21	Added together and renormalized
	Job search skills	I have the skills and experience valued by employers.		4.22	
	Job search skills	I know how to prepare a resume.		4.23	
	Job search skills	I know how to complete a job application.		4.24	
	Job search skills	I have the skills I need for a well-paying job.		4.25	
	Job search skills	I have the required skills and knowledge to run/start my own business.		4.26	
Household bargaining	Own money	Do you have any money of your own that you alone can decide how to use?	Dummy equals one if "Yes"	5.15	

	Involvement in intra-household decision making	<p><u>Consumption Sphere 1:</u> How to spend a small amount of money, or consume money, which you have earned yourself.</p> <p><u>Consumption Sphere 2:</u> How to spend a large amount of money (e.g., buying an expensive item like a bicycle or cow), which you have earned yourself.</p> <p><u>Social Sphere:</u> Decision to visit a friend in your neighbourhood or village.</p> <p><u>Working Sphere 1:</u> Decision to up work outside the home for income.</p> <p><u>Working Sphere 2:</u> Decision to take up an offer for a promotion.</p> <p><u>Mobility Sphere:</u> Decision to take a bus or other public transport to run an errand.</p>	Mean indicating respondent's decision-making involvement in four categories	4.27 , 4.28 , 4.29 , 4.30 , 4.31 , 4.32 , 4.33	
Health and safety conditions at work	Physical security at work	How would you classify how you feel about your physical security at your job?	Dummy equals one if "My workplace is very safe, I am not afraid of getting sick or physically hurt when I do my job"		
	Cause of physical	What workplace factors, if any, contribute to poor	Normalized additive index		Normalized additive index



	health issues	<p>physical health at your current job?</p> <ul style="list-style-type: none"> <li>-Uncomfortable sitting arrangement</li> <li>- Noise</li> <li>- Lack of working knowledge</li> <li>- Exposure to different dust</li> <li>- Lack of safe drinking water</li> <li>- Lack of clean and sanitary latrines</li> <li>- No facilities of washing and bathing</li> <li>- No availability of first aid box</li> <li>- No secure covering and protection</li> <li>- Improper lighting</li> <li>- Insufficient ventilation</li> <li>- Others</li> </ul>			
	Emotional security at work	How would you classify how you feel about your emotional security when you are at your job?	Dummy equals one if “I feel very comfortable”		
	Safe work location	How safe do you consider the area where your work is located?	Dummy equals one if “very safe”		
	Mental health score	<p>How often have you been bothered by each of these 7 core symptoms over the past 2 weeks (GAD-7 items):</p> <p>1) nervousness;</p>			

	<p>2) inability to stop worrying;</p> <p>3) excessive worry;</p> <p>4) restlessness;</p> <p>5) difficulty in relaxing;</p> <p>6) easy irritation; and</p> <p>7) fear of something awful happening</p> <p>Response categories are “not at all,” “several days,” “more than half of the days,” and “nearly every day,” scored as 0, 1, 2, and 3, respectively.</p>			
Cause of psychological health issues at work	<p>What workplace factors, if any, contribute to poor mental health or burnout at your current job (<u>choose all that apply</u>)?</p> <ul style="list-style-type: none"> <li>- Fear of accidents</li> <li>- Work schedule (shift working, long, unpredictable and / or unsocial working hours, <u>work at night</u>)</li> <li>- Workload (work overload and high levels of time pressure)</li> <li>- Ill-treatment, harassment at work</li> <li>- No recreation</li> <li>- Irregularities in salary</li> <li>- Task design (fragmented or</li> </ul>	Additive index		

		<p>meaningless work, underuse of skills, high uncertainty)</p> <ul style="list-style-type: none"> <li>- Conflicting demands or work and home</li> <li>- <a href="#">Harassment at public transport for women</a></li> <li>- Poor <a href="#">social family</a> support</li> <li>- Others</li> </ul>			
Gender attitudes	Leadership in business	Women should be able to hold leadership roles in businesses.	Normalized scale ascending from 0-1	5.10	Added together and renormalized
	Gender equality in education	It is better to send a son to school than it is to send a daughter.	Normalized scale ascending from 0-1	5.14	
	Gender equality in education	Women can simultaneously pursue a career while raising and caring for a family.	Normalized scale ascending from 0-1	5.16	
	Attitudes towards women working outside the home	Women should be free to work outside the home.	Normalized scale ascending from 0-1	5.4	
	Attitudes towards women working outside the home	My family is not opposed to women working outside the home.	Normalized scale ascending from 0-1	5.5	
	Attitudes towards women working outside the home	It is safe for women to work outside the home.	Normalized scale ascending from 0-1	5.8	
	Attitudes towards women working outside the home	My community is not opposed to women working outside the home.	Normalized scale ascending from 0-1	5.6	

	Self-assessment	I am comfortable working in an environment with both men and women.	Normalized scale ascending from 0-1	5.18	
	Self-assessment	How do you expect work to affect your marriage prospects?	Dummy equals 1 if “Increase prospects of good marriage”	5.17	
Family support	Family supports employment decision	Do you feel that your family supports your employment decisions?	Dummy equals 1 if “Yes”	4.27	
Well-being and future prospects	Job security	I believe I will find a job (or, if employed, still have a job), within the next 6 months.	Dummy equals 1 if “Yes”	5.1	
	Income expectations	I believe my total monthly income one year from now will be ...			
	Life satisfaction	Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. The top of the ladder represents the best possible life for you and the bottom represents the worst possible life for you.  On which step of the ladder would you say you personally stand at this time?	Normalized scale ascending from 0-1		
	Optimism	On which step do you think you will stand about 5 years from now?	Normalized scale ascending from 0-1		
IPV	Attitude	A wife has a right to express her opinion even when she disagrees with what her husband is saying.  A wife should tolerate being beaten by her husband in order to	Dummy equals 1 if respondent agrees to one or more statements	5.12 , 5.13 , 5.9, 5.11	

		<p>keep the family together.</p> <p>Women should be able to choose when to marry and have children.</p> <p>The important decisions in the family should be made only by the men of the family.</p>			
	Controlling behavior	<p>I am now going to ask you about some situations that are true for many women. Thinking about your partner, would you say it is generally true that he:</p> <p>A. Tries to keep you from seeing your friends?</p> <p>B. Tries to restrict contact with your family of birth?</p> <p>C. Insists on knowing where you are at all times?</p> <p>D. Ignores you and treats you indifferently?</p> <p>E. Gets angry if you speak with</p>	Dummy equals 1 if at least one act of controlling behavior during the 12 months prior to the interview.	5.20	

		<p>another man?</p> <p>F. Is often suspicious that you are unfaithful? Or accuses you of being unfaithful?</p> <p>G. Expects you to ask his permission before seeking healthcare for yourself?</p>			
	Emotional abuse	<p>The next questions are about things that happen to many women, and that your current partner, or any other partner may have done to you. I want you to tell me if your current husband / partner, or any other partner, has ever done the following things to you.</p> <p>A. Insulted you or made you feel bad about yourself? /</p> <p>B. Belittled or humiliated you in front of other people?</p> <p>C. Did things to scare or intimidate you on purpose (e.g., by the way he looked</p>	Dummy equals one if at least one act of emotional abuse during the 12 months prior to the interview.	5.21	

		at you, by yelling and smashing things)? D. Threatened to hurt you or someone you care about?			
	Physical violence	Has he or any other partner ever A. Slapped you or thrown something at you that could hurt you? B. Pushed you or shoved you? C. Hit you with this fist or with something else that could hurt you? D. Kicked you, dragged you or beaten you up? E. Choked or burnt you on purpose? F. Threatened to use or actually used a gun, knife or other weapon against you?	Dummy equals one if at least one act of physical violence during the 12 months prior to the interview.	5.23	

## 5. Estimation strategy

### 5.1 Treatment effect equation to be estimated

The primary hypotheses we will estimate are the following:

$H_0$ : No impact of participation in S2S on outcome family x

A detailed description of the measurement of each outcome variable is provided above.

To test our hypothesis, we will be estimating the following simple model using Ordinary Least Squares:

$$Y_i = \alpha + \beta_1 T_i + \delta Z_i + \varepsilon_i$$

Where  $Y_i$  represents the outcome (or summary index of outcomes, as specified above), for individual  $i$ .  $T_i$  is a binary treatment variable equal to 1 if the individual was part of the treatment group.  $Z_i$  is the baseline value of the outcome variable, when available.  $\beta_1$  will provide the intent-to-treat effect, which is the effect of being in the treatment group on the outcome variable.

In addition, we will estimate the treatment effect with a difference-in-difference (DiD) specification to increase power. This will be our preferred method for variables for which we have baseline data. Our equation will be:

$$Y_{it} = \alpha + \beta_1 T_i + \beta_2 Post_t + \beta_3 (T_i \times Post_t) + \varepsilon_{it}$$

Where  $Y_{it}$  represents the outcome of interest as specified above.

## **5.2 Multiple outcomes and multiple hypothesis testing**

We will conduct multiple hypothesis testing on the three primary outcome variables, by adjusting the p-values to account for the risk of over-rejecting the null hypothesis. We apply False Discovery Rate corrections to adjust the p-values for multiple inference using Benjamini, Krieger & Yekutieli (2006) two stage procedure for sharpened q-values (Anderson, 2008; Benjamini, Krieger, & Yekutieli, 2006).

For each of the “outcome families” under mechanisms and secondary outcomes, we will construct an outcome family-index (i.e. a standardized average across each outcome in the family) (see Kling, Liebman, & Katz (2007)).

## **5.3 Procedures to be used for missing data and for addressing outliers**

We will follow Lin and Green (2016) in treating missing covariates. If no more than 10 percent of the covariate’s values are missing; we will recode the missing values to the overall mean (testing sensitivity of estimates to these approaches by comparing results with those obtained from the sample with non-missing covariates). If more than 10 percent of the covariate’s values are missing, we will include a missingness dummy as an additional covariate and recode missing values to 0.

As specified above, all monetary values will be top censored at the 99<sup>th</sup> percentile to contain outliers.

## **5.4 Outcomes with limited variation**

Questions for which 95 percent of observations have the same value within the treatment group will be omitted from the analysis and will not be included in any indicators or hypothesis tests. If



omission decisions result in the exclusion of all constituent variables for an indicator, the indicator will not be calculated.

### **5.5 Survey attrition**

We will estimate whether attrition is related to treatment status by regressing treatment status on an indicator for attrition. If treatment is not found to significantly affect attrition at the 5% level, then the estimations will proceed without adjusting for attrition. If treatment is found to significantly affect attrition at the 5% level, we will bound the treatment effect using Lee bounds (Lee, 2009).

### **5.6 Heterogeneous treatment effects**

We will estimate the heterogeneous treatment effects by interacting the treatment status with our choice of variable. We are primarily interested in examining the heterogeneous effects with respect to gender.

### **References**

- Anderson, M. (2008). Multiple inference and gender differences in the effects of early intervention. *Journal of the American Statistical Association*, *103*, 1481–1495.
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