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Bangladesh Early Years Preschool Program Impact Evaluation

Baseline Report for the World Bank Strategic Impact Evaluation Fund

APRIL 2018

MAKING RESEARCH **RELEVANT**

American Institutes for Research:
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Abbreviations and Acronyms

AIR	American Institutes for Research
EYPP	Early Years Preschool Program
IDELA	International Development and Early Learning Assessment
SIEF	Strategic Impact Evaluation Fund
WB	World Bank

Acknowledgments

We would like to thank the families, children, and educators who so generously gave their time to participate in this study.

Thank you to the World Bank for sponsoring this study.

And thank you to the Save the Children field office staff in Meherpur for their support in carrying out data collection.

Executive Summary

Coinciding with its economic growth over the past few decades, Bangladesh has rapidly improved many social indicators, including access to and the quality of primary and pre-primary education. The National Pre-primary Operational Framework includes a plan for two years of pre-primary education, starting with one year of pre-primary education in all primary schools and gradually growing into a two-year program. With its Early Years Preschool Program (EYPP), Save the Children has been providing the additional year of preschool to four-year-old children, who then progress to the one-year government pre-primary class at age five and to first grade at age six.

The Early Years Preschool Program

Save the Children supervises and monitors the implementation of EYPP. The EYPP is typically implemented for two hours per day, in government primary schools. The program uses the existing pre-primary classroom and teacher, but with a different curriculum and materials, and at different times of the day. The EYPP is intended to serve and mostly serves children who are one year away from on-time enrollment in government pre-primary, and two years away from enrollment in grade one. Save the Children provides a comprehensive teacher training for a period of 10 days, supplemented with bi-monthly refresher trainings. Teachers are also expected to conduct six parenting sessions to build awareness among parents about the provision of a supportive and educational environment at home, and to provide materials and activities for home learning in literacy and mathematics.

The School Management Committee and Save the Children's Community Core Group also carry out events to sensitize parents and community members about the importance of pre-primary education for their children.

Evaluation Objectives and Intended Audience

This study aims to investigate the impacts of offering this additional year of pre-primary education in Bangladesh on child development outcomes (cognitive and social emotional), and will examine the benefits relative to the costs of the program. The study will also examine the mechanisms through which EYPP affects the outcomes of interest (e.g., children's school readiness), and the operational and community conditions for program implementation. This study will provide evidence for the Government of Bangladesh on how and how much the additional year of preschool benefits children, and at what cost. In addition to informing future policy in Bangladesh, this information may also be useful for other countries considering similar programming. This report provides baseline findings for this evaluation.

Evaluation Methodology

This study is a randomized control trial (RCT) of the EYPP to determine its impacts on children's learning and development. An RCT is the most rigorous type of study design. In 2016, we randomly assigned 100 schools in the Meherpur district of Bangladesh to either receive the EYPP (n = 50) or to a no-program control group (n = 50). The children participating in the study from these communities are expected to enroll in government preprimary in 2019 and enter grade 1 in 2020. In the 50 treatment school catchment areas, children selected for the study will be invited to participate in the EYPP program at their local school in 2018, and then will go on to government preprimary as usual in 2019. In the 50 control school catchment areas, children selected for the study will be eligible to enroll in the government preprimary as usual in 2019, but will not have EYPP available to them the year before. This allows us to estimate the net effects of adding the second year of pre-primary education (EYPP) compared to having only one year of pre-primary education (business as usual).

This evaluation is intended to answer primary research questions about program effectiveness and cost-effectiveness and secondary research questions regarding the mechanisms of change, relative program effects for boys versus girls, and fidelity of program implementation. We will be assessing children's school readiness, noting their characteristics (such as their health, parental education, etc.), capturing information on the home, community and school context, and examining fidelity of program implementation. The World Bank is gathering cost information that will be used to examine costs relative to benefits for the EYPP.

We collected baseline data in all 100 communities in December 2017 and January 2018, with a sample of 1,856 children. We will conduct a mid-term outcome assessment in approximately November 2018 (just before the study children are expected to start the one-year government pre-primary program), and will conduct an end-line assessment just prior to on-time enrollment in grade one (approximately November 2019). The EYPP program will serve the children assigned to it between February and December 2018.

Conclusions

Participant recruitment and baseline data collection were carried out according to plan, with no significant issues or concerns.

Baseline data show that families in the evaluation sample (especially mothers) are relatively well educated, and that most families can meet their children's basic needs. For example, food insecurity was rare among the participating households, and most families had toys and reading material available in the home. The only significant negative feature that we found in children's

lives was a high rate of harsh discipline practices in use, with most children yelled at and/or criticized and almost experiencing physical punishment in the week before the baseline visit.

Nearly all of the EYPP schools had potable water and clean, functioning latrines available. All EYPP classrooms had at least some teaching and learning materials available, and most (but not all) had a solid roof, electricity, and a functioning fan.

The baseline assessment of children's school readiness showed that most children had at least some readiness, but there was a great deal of room for growth.

Based on statistical testing, we conclude that the treatment and control groups were well balanced on child and family background characteristics. There were also no statistically significant baseline differences in treatment and control children's school readiness in any area.

In sum, the goals for baseline data collection were fully achieved, and there are no concerns to date regarding the successful implementation of this impact study or the EYPP program.

1. Introduction

Bangladesh has been recognised for its great success in improving educational and health outcomes during the past few decades. Coinciding with its economic growth over the past few decades, Bangladesh has rapidly improved a range of important social indicators, including the access to and the quality of primary and pre-primary education. The National Pre-primary Operational Framework includes a plan for two years of pre-primary education, starting with one year of pre-primary education in all primary schools and gradually growing into a two-year program. With its Early Years Preschool Program (EYPP), Save the Children has been providing the additional year of preschool to four-year-old children, who then progress to the one-year government pre-primary class at age five and to first grade at age six.

1.1 Evaluation Context

Growing evidence shows that preschool attendance increases young children's readiness for school by improving cognitive and social-emotional development at primary school entrance and can have lasting benefits beyond primary, especially for socially and economically disadvantaged students (Currie and Thomas 1995; Deming 2009; Feller 2014; Kline 2014). Pilot studies from rural Bangladesh confirm the positive impacts that preschool has on school readiness and social development outcomes (Aboud, 2006; Aboud et al., 2011).

In 1995, Save the Children began implementing preprimary programs in different regions of Bangladesh. In the district of Meherpur, these activities started in 2007. During this period, the government did not provide formal preprimary education. In 2008, when the government's Primary Education Department developed the operational framework for preprimary education, Save the Children started collaborating closely with the Directorate of Primary Education (DPE) to support the provision of one year of preprimary education. The National Pre-primary Operational Framework describes the plan for two years of preprimary education, starting with one year of preprimary education in all primary schools and gradually growing into a two-year program. To support these plans, Save the Children developed a pilot program for the Early Year Preschool Program (targeting 4-year-olds) and started implementing it in a subset of primary schools that showed interest in the program. To implement the pilot, Save the Children worked with primary schools, the communities in which they were operating, and the School Management Committees (SMC) to find locations for providing the EYPP. In some cases, the pilot program was offered in community-based classrooms affiliated with the nearby primary school. The current study constitutes a formal impact evaluation of the EYPP.

1.2 Purpose, Uses and Objectives of the Evaluation

The purpose of this evaluation is to provide rigorous evidence of the relative costs and benefits of an additional preschool year for Bangladeshi children. This information can be used by Bangladesh's DPE to inform decision making with regards to scaling a second year of pre-primary education. This study is also expected to inform the wider field of early childhood education, as more low- and middle-income countries seek effective and affordable models to improve school readiness and on-time transitions to primary school.

This study will provide information regarding the effects of the EYPP on children's comprehensive school readiness, including cognitive, motor, and social development. This study will also examine the extent to which the program was implemented as intended, was compatible with existing values and resources, and benefitted both boys and girls. The World Bank is conducting a cost study so that costs and benefits can be considered together when examining the potential of this program to improve child outcomes.

1.3 Evaluation Scope and Approach

We are conducting a randomized control trial (RCT) of the EYPP to determine its impacts on children's learning and development. In 2016, we randomly assigned 100 schools in the Meherpur district of Bangladesh to either receive the EYPP (n = 50) or a no-program control group (n = 50). In October 2017, we conducted a census of the area around each of the 100 schools to identify children within a 15-minute walk of the school who were in the target age range – that is, those expected to enroll in government preprimary in 2019 and enter grade 1 in 2020. In the 50 treatment school catchment areas, children selected for the study will be invited to participate in the EYPP program at their local school during the 2018 school year, and then will go on to government preprimary as usual in 2019. In the 50 control school catchment areas, children selected for the study will be eligible to enroll in the government preprimary as usual in 2019, but will not have EYPP available to them the year before.

We collected baseline data in all 100 communities in December 2017 and January 2018. We will conduct a mid-term data collection to assess children's school readiness just prior to on-time enrollment in government pre-primary (2019 school year), and will conduct an end-line assessment of school readiness just prior to on-time enrollment in grade one (2020 school year).

1.4 The Early Years Preschool Program

The EYPP extends the preschool education available to children 4 years of age, offering younger children the possibility of receiving two years of preschool education instead of only one year (at age 5). The EYPP aims to ensure holistic development for children and to create early

learning opportunities for younger children. By offering more years of preschool education, the EYPP expects to provide richer experiences for children that translate into better outcomes, not only for school readiness but also for subsequent early primary education.

In 2013, during development of EYPP, it was reviewed by government officials, preschool implementers and international advisors. The program is grounded in the existing Early Learning and Development Standards of comprehensive ECCD policy. Considering its importance, Save the Children piloted a small EYPP model. Based on the lessons learned from the pilot, SJ adapted and improved the model and expanded the pilot in 2016. The expanded version pilot EYPP is also being implemented within Government primary schools.

The goal of the EYPP model is to ensure holistic development for children and to create early learning opportunities for younger children. In this model, 15-20 4-year old children enroll in a class. Children attend 5 days a week and the length of each daily session is two hours. Children start these sessions in January and continue until December so that the children can enroll in the government preprimary class in the next year. The pre-primary teacher conducts EYPP sessions. The same teacher uses the same infrastructure (preprimary classroom) and resources in an effort to make the EYPP model cost effective.

The following key activities and strategies have been undertaken to achieve the EYPP program goals:

- Child enrollment: Based on primary school surveys of school catchment areas, Save the Children's *Shishuder Jonno* (child sponsorship initiative) field staff work with school management committees, community groups, and EYPP teachers to identify and locate children. The school management committees, community groups, and *Shishuder Jonno* staff set enrollment criteria such as the age of children (4 years old), their living about 15 minutes or less walking distance from a relevant government primary school, and their have parents willing to enroll them in the program.
- Curriculum development: The EYPP curriculum offers a range of age-appropriate and developmentally appropriate activities for children in a joyful learning environment. It follows a play-based curriculum that focuses on building children's learning holistically across developmental domains. The curriculum aligns with the current government one-year preprimary curriculum. In a regular lesson plan, the teacher facilitates singing, rhymes, storytelling, outdoor and indoor play, free play in six corners and early learning activities with the children. This curriculum has been tested, field findings were incorporated, and it was finalized before the start of this evaluation.

- Material Development and Supplies: The EYPP uses a teachers' guide that supports teachers through each part of the curriculum, a training manual, and a list of classroom materials (e.g., developmentally appropriate books, manipulative toys, and playing materials) that should be available. As part of EYPP's rollout, *Shishuder Jonno* technical staff conducted a low-cost or no-cost material development workshop. Teachers participated in this workshop and produced a large quantity of materials to use in their EYPP class. Children play in the six corners using blocks, interlocking shape cards, Lego, utensils, different types of puzzles, picture cards, charts, color pencils and storybooks. Teachers use registers to keep records of children's attendance, and notes from meetings with parents.
- Capacity Development: The EYPP teachers receive 5 days basic training and 4 days refresher training by *Shishuder Jonno* early childhood staff. The training focuses on the concepts, areas, and developmental skills of child development, basic early childhood development principles, classroom curriculum, techniques for working with children, and positive child behavior management strategies. Moreover, teachers receive training on early literacy and math instruction, and how to conduct parenting sessions.
- Parents Meeting: Parents of EYPP learners attend monthly sessions facilitated by teachers. These parenting sessions aim to build an understanding of child development and promote literacy and numeracy skills of children at home. Parents receive sessions on topics such as talking and listening, promoting reading habits, and counting and sorting things with their children at home.
- Community Involvement: *Shishuder Jonno* staff involves school management committees and community groups in the startup activities to establish the EYPP. The school management committees were involved in the recruitment process of the teachers. Before starting the EYPP, teachers, the school management committee and community groups arrange inception meetings with parents to describe the objective, importance, and parents' roles to EYPP. The school management committee provides partial teachers' salaries and helps to support children's enrollment in pre-primary class after completion of EYPP.
- Government Primary Teachers' Involvement: Government primary school teachers receive EYPP children in their schools. In inception meetings, head teachers welcome the EYPP children, and introduce the school to them. The head teachers follow up EYPP teachers' and child's attendance, monitor EYPP sessions and provide technical assistance.
- Monitoring: *Shishuder Jonno early childhood* technical staff monitors and supervises the EYPP on a regular basis. The technical staff identifies gaps and subsequently provides on

the job support, and provides capacity building supports through refresher training. Save the Children's Monitoring Evaluation Accountability and Learning (MEAL) team maintains monitoring records, and examines key process indicators to monitor quality. Based on data provided by the MEAL team, the program team develops and implements strategies to address any implementation gaps and overcome related challenges.

1.5 Evaluation Questions

This evaluation will answer primary research questions about program effectiveness and cost-effectiveness and secondary research questions about the mechanisms of change, relative program effects for boys versus girls, and fidelity of program implementation.

Primary Questions:

1. What is the impact of offering an additional year of preschool on the cognitive development of young children in a rural setting?
2. What is the impact of offering an additional year of preschool on the social-emotional abilities and motor development of young children in a rural setting?
3. What is the benefit relative to the cost of offering an additional year of preschool with regard to learning and development outcomes?

Secondary Questions:

1. What is the mechanism through which the intervention affects the outcomes of interest?
2. Is the age at which the children start preschool an important factor?
3. Is the time spent in the preschool program an important factor?
4. What elements of the EYPP program appear to be most important in achieving the program's impacts?
5. How is the value added of an additional year of preschool on young children's cognitive development different for girls and boys?
6. How is the value added of an additional year of preschool on young children's social-emotional development and motor development different for girls and boys?
7. What are the operational and community conditions for program implementation?
8. To what extent is the program implemented with fidelity?

9. What do teachers think about the training activities and materials? How can the training be improved?
10. What are the challenges that teachers encountered when implementing the EYPP curriculum?

2. Baseline Data Collection

Baseline data were collected according to plan. In this section, we (1) review the objectives of the baseline data collection, (2) describe sampling and randomization at the community level, (3) describe sampling at the child level, (4) provide updated power calculations based on the intra-class correlation (ICC) found for children's baseline school readiness, (5) describe the instruments used at baseline, (6) describe the training of enumerators for baseline data collection, and (7) provide information regarding both how the baseline data collection was carried out and the extent to which baseline data collection happened according to plan.

2.1 Objectives of the Baseline Data Collection

Baseline data collection was carried out for three main purposes. First, it is important to document and describe the status of the evaluation sample before an intervention is introduced. This information includes background information on the children, plus their levels of school readiness before any programming has been introduced. We also documented conditions for EYPP classrooms to capture the context within which the program would be implemented.

Second, with baseline data, we will be able to compare it to outcome data to measure what changed and how much it changed (based on the theory of change).

And third, we must conduct baseline equivalence tests to measure the extent to which randomization created equivalent treatment and control groups. Baseline equivalence tests also identify which outcomes of interest show pre-existing differences between groups, so we can control for these differences when examining impacts at endline.

2.2 Sampling and Randomization of Communities

One hundred schools in the Meherpur district of Bangladesh are participating in this study. These schools were selected and randomly assigned in 2015 using the following process:

1. From the pool of communities without pilot EYPP across the three *upazilas* in Meherpur (N=238), removed all community-based schools (n=90), leaving us with 148.
2. Where communities had multiple schools, we restricted the sample to one school for the study to avoid potential cross-over effects, leaving us with 105 schools.

3. Because we needed 100 schools for the study, we randomly dropped five of the 105.
4. We stratified the 100 schools by union, then randomly assigned 50 schools to the EYPP group and 50 schools to a business-as-usual control group.

In the 50 EYPP schools, the program was first introduced in the beginning of 2017, so the first group of children has just completed the program (these children will not be included in the study). In six of the 50 treatment schools, the program was not offered in 2017, but started in 2018. See Appendix A for details on group assignment by *upazila* and union.

2.3 Sampling of Children

During an October 2017 visit to Meherpur, we learned that EYPP schools typically accepted approximately 18-20 children, and no more than 25 children. The EYPP staff expressed a preference for enrolling children within proximity to the school, and giving priority to children who live closer to the school or center. This preference is guided by the experience that children who live further away are less likely to regularly attend and their parents are less likely to be involved in the program. All schools visited stated that they did not expect any children to participate who lived further than a 15-minute walk from the EYPP class.

Data International conducted a census of every household within a 15-minute walk of the primary school. The resulting census included a total of 36,806 households across the 100 study communities. For each household, if there were any children ages 3-6 years old, enumerators recorded the child's name and date of birth, father's name, whether the child was currently in an education program (and if yes, what type), and what the family's plan was for the child in 2018 (stay home, or participate in the educational program). Enumerators also recorded the exact household location using GPS coordinates, and asked how many minutes it will take the child to walk from the home to the primary school.

The target sample for our study included all children in the census areas born from January 1, 2013 – December 31, 2013 (because on-time enrollment in government pre-primary school for these children would be in January 2019). In most cases (exact figure unknown but in a substantial majority), children's dates of birth were verified with the Extended Program of Immunization (EPI) card or a birth certificate. If these documents were unavailable (even after parents were encouraged to search), enumerators recorded what the parent reported as the child's date of birth. We identified a total of 1,986 children born in 2013. We did not exclude any age-eligible children based on any other criteria (for example, children with disabilities were included in our sample pool). See Appendix B for recruited sample size and percentage of target for each school/community, by *upazila.* See Appendix C for a copy of the informed consent for family recruitment into the study.

AIR agreed with the World Bank that we would sample an average of 20 children in each of the 100 study communities. Many communities had fewer than 20 eligible children. Because EYPP centers will typically enroll up to 25 children, for both treatment and control communities with 25 or fewer children, we included all eligible children in the study (with parental consent). In the 20 communities (14 treatment and 6 control) with over 25 children in the target age range, we drew a random subsample of 25 for inclusion in this sample.

Exhibit 1 shows the sample recruited for this study. Recruitment rates were very high among children sampled for this study. All communities and EYPP schools included in the sample participated in baseline data collection as planned.

Of the 1,856 children recruited for this study, 908 were girls and 948 were boys.

Exhibit 1. Study Sample.

Unit	Target Sample	Recruited Sample
Children/Families	1,903	1,856 (97.5%)
EYPP Schools	50	50 (100%)
Communities	100	100 (100%)

2.4 Power Analysis

Power analysis refers to a statistical measure of a given sample size and study design and its ability to detect program treatment effects. A study that is underpowered may not be able to detect treatment effects that may be present and relevant, but too small for the study to measure because of an inadequate sample size.

Exhibit 2 shows the assumptions and the minimum detectable effect (MDE) for the International Development and Early Learning Assessment (IDELA) scores, a key outcome measure for this study. The intra-class correlation (ICC), proportions of variances (R12 and R22), and average number of children per school are calculated from the baseline data. The child-level covariates include characteristics of parents and households, and age and sex of the child. The community-level covariates include infrastructural characteristics and distance to various services. We calculate the MDE using the software tool "PowerUp!".[1] Assuming perfect take up, i.e., all the sampled children in the baseline in treatment communities enroll in the pre-school, the smallest standardized mean difference in IDELA score we will be able to detect is 0.19.

[1] Dong, N. and Maynard, R. A. (2013). PowerUp!: A tool for calculating minimum detectable effect sizes and sample size requirements for experimental and quasi-experimental designs. Journal of Research on Educational Effectiveness, 6(1), 24-67.

Exhibit 2. Power Calculations.

Assumptions		Comments
Alpha Level (α)	0.05	Probability of a Type I error
Two-tailed or One-tailed Test?	2	
Power (1-β)	0.80	Statistical power (1-probability of a Type II error)
Rho (ICC)	0.11	Proportion of variance in outcome that is between clusters
P	0.50	Proportion of schools randomized to treatment
R12	0.12	Proportion of variance in child-level outcome explained by child covariates
R22	0.31	Proportion of variance in school-level outcome explained by school covariates
g*	10	Number of school covariates
n (Average Cluster Size)	19	Mean number of children per school
J (Sample Size [# of Clusters])	100	Number of schools
MDE	**0.19**	**Minimum Detectable Effect**

In our previous communication we had assumed an ICC of 0.25 based on a comparable dataset of children test scores. The actual ICC based on the baseline survey is 0.11. The decrease in assumed ICC has decreased the MDE from 0.25 stated in the sampling frame memo to 0.19, which strengthens the evaluation and makes it more robust to potential sample attrition. Assuming a take up of 80% implies we will be able to detect a difference of 0.24 (= 0.19/0.80) standard deviations in the IDELA scores between treatment and control groups.

2.5 Instruments

The instruments used for this baseline study captured characteristics of the study communities and schools, background characteristics of children and their families; provided a pre-test of children's school readiness; and provided information regarding the basic infrastructure and material resources available at intervention schools.

Community Characteristics Questionnaire

In each study community, the informant for the Community Characteristics Questionnaire was a school head, head teacher, or other leader at the primary school located in that community. The purpose of this instrument was to document basic conditions in the study communities, including community infrastructure, community assets, and current initiatives at the school that

are intended to benefit children ages 3 to 6 years. Exhibit 3 summarizes the domains and topics covered in this questionnaire. Please see Appendix D for a copy of this instrument.

Exhibit 3. Domains and Topics Covered in the Community Characteristics Questionnaire.

Domain	Topics
Community Infrastructure	Accessibility (e.g., road quality) Availability of Electricity Availability of Mobile Telephone Service Availability of Internet Access
Community Assets	Availability of Healthcare Providers Union Council Availability of Schools
Programming for Ages 3 to 6	School Feeding Water and Sanitation for School Health (WASH) Provision of School Supplies to Needy Families Availability of Other Programming Not Listed

School Observation

The School Observation was only used with schools in the 50 intervention communities. This instrument was intended to provide a baseline description of the conditions in which the EYPP will be implemented, including safety, presence of utilities in the pre-primary classroom, WASH, and the material teaching and learning resources available to the EYPP class.

Exhibit 4 summarizes the domains and topics covered in this observation. Please see Appendix D for a copy of this instrument.

Exhibit 4. Domains and Topics Covered in the School Observation.

Domain	Topics
Classroom and School Conditions	Safety Classroom Utilities and Comfort WASH
Material Resources	Literacy Learning Materials Numeracy Learning Materials Toys for Hands-On Learning Toys for Pretend Play

Family Questionnaire

The purpose of the family questionnaire was to gather information on the characteristics of the study children and their home environments (see

Exhibit 5). Nearly all items on this questionnaire have already been widely used in Bangladesh for national household surveys. To administer this tool, enumerators read questions and response options aloud to respondents (parents or guardians of the study children). Please see Appendix D for a copy of this instrument.

Exhibit 5. Domains and Topics Covered in the Family Questionnaire.

Domain	Topics
General Family Information	Household Size Mother's and Father's Ages Mother's and Father's Educational Backgrounds Mother's and Father's Literacy Presence of Other School-Age Children in the Home Enrolment of Other School-Age Children in School
Home Environment/Parenting Practices	Presence of Reading Materials in the Home Presence of Toys and Learning Materials in the Home Family Learning Support Activities with Study Child
Family Socio-Economic Background	Size of Home Presence of Utilities in Home Food Security Household Expenditures Child's Current Health Access to Health Supports for Child

School Readiness

Children's baseline school readiness was assessed with the IDELA, which has been widely-used in Bangladesh. The assessment was administered to children one-on-one by a trained enumerator. See

Exhibit 6 for the domains and topics covered in the assessment. We are unable to include a full copy of the IDELA in this report due to copyright restrictions.

Exhibit 6. Domains and Topics Covered in the School Readiness Assessment.

Domain	Topics
Social and Emotional Development	Self-Awareness Friends Emotional Awareness/Regulation Empathy/Perspective Taking Solving Conflict
Emergent Numeracy	Comparison by Size and Length Sorting and Classification Shape Identification Numeral Identification One-to-One Correspondence Addition and Subtraction Puzzle Completion
Emergent Literacy	Expressive Vocabulary Print Awareness Letter Identification First Letter Sounds Emergent Writing Oral Comprehension
Executive Function	Short-Term Memory Inhibitory Control
Fine Motor Skills	Copying a Shape Drawing a Person Folding Paper
Gross Motor Skills	Hopping

Domain	Topics
Approaches to Learning	Attention Confidence Concentration Persistence Mastery Motivation Interest

2.6 Enumerator Training and Instrument Piloting

A total of 32 data collectors and 4 field supervisors were trained. All field staff was employed by Data International, and all were Bangladeshi. The AIR project lead was present at the training to provide support as needed, and technical input was provided to Data International's research team by Save the Children's Dhaka and Meherpur offices.

Two experts from Save the Children, Bangladesh provided intensive training on IDELA to the data collectors and field supervisors from 3 to 6 December 2017. The training included pretesting of the instrument. Training for the remainder of the tools was provided by senior staff members of Data International.

Following the 4-day training in Dhaka, a 3-day second round/refresher training (December 17-19, 2017) was organized in Meherpur prior to the start of baseline data collection. The data collectors and the field supervisors underwent orientation and training in the usage of electronic data collection devices with preinstalled IDELA tools and the household survey instrument.

Upon completion of the training, all 40 data collectors and field supervisors signed the AIR Participant Protection Assurance form. All data collectors and field supervisors also attended a briefing on Save's the Children's Child Safeguard Policy, organized by Save the Children's Meherpur field office.

2.7 Data Collection Process

The baseline data collection was conducted between 20 December 2017 and 12 January 2018, and included recruitment of children and their families into the study. Rural Bangladesh does not have street or unique household addresses. Nevertheless, the data collectors did not encounter any difficulties in revisiting the sampled households. The census listing provided name of household head and that of the para (sub-village), along with the GPS coordinates and mobile telephone number. Almost all the baseline data collectors had been involved in carrying

out the census; hence, they were familiar with localities.

Informed Consent

The data collection team had a list of children who had been sampled for the study. Once a child (household) was identified, the data collector explained their purpose of visit and read out the consent form to the respondent and obtained verbal or written permission. After obtaining parental consent, contact details of Data International, AIR and Save the Children representatives were shared with the respondents. This information was shared in the event respondents had further queries on the study in the future, or wished to later withdraw from the study.

Completion of Assessment Instruments

While 16 data collectors were entrusted with the task of using tablets for IDELA test administration, the remaining data collectors gathered household data. The field supervisors were responsible for conducting the community survey and completing the school observation form. From December 20, 2017 to January 12, 2018 a total of 1,856 households out of 1,903 targeted interviews and IDELA assessments (98% of the total sample) were completed. See Appendix A for sample participation numbers by *upazila*. A total of 47 household/IDELA interviews could not be covered due to migration from the area (n = 13), age ineligibility (n = 12),[2] case duplication (n = 2) or otherwise unavailable during the data collection window (n = 20). Community-level data were gathered for all 100 communities, and school-level data gathered for all 50 EYPP schools as planned.

Challenges

There were minimal challenges to the successful completion of baseline data. There were no strikes or *hartals* in Meherpur during the data collection, and the political situation was stable.

The issues that were encountered are as follows:

- A few cold days in January hampered data collection somewhat.
- In some cases, multiple household visits were needed to complete the baseline data collection. During the first household visit, several of the children along with their mothers had gone to visit their maternal or paternal grandparents' houses or to some other relatives' homes, following the completion of school final examination.
- In the case of sick children, multiple visits were needed to complete the IDELA.

[2] Children's dates of birth were gathered during the census in November 2017, but were re-checked at baseline.

- Not all children fully cooperated during the IDELA testing. During IDELA administration, some of the children were too shy or nervous to participate, and a few cried. In some cases, the child was uncomfortable or non-responsive, a follow-up visit was arranged to take the IDELA test.
- Children taking IDELA testing tend to be more comfortable with female assessors than male interviewers. In some cases, the children did not want to participate in the IDELA conducted by male assessors. In such a situation, the IDELA testing was conducted by a female assessor later.
- Bystanders and onlookers during the IDELA session adversely affected the children's performance. During the IDELA administration, people from the locality, especially adults were inclined to observe the proceedings. Children tended to be shy and uncooperative in such an environment. All onlookers were politely requested to vacate the premises where IDELA was conducted.

3. Baseline Results

The baseline evaluation results presented in this section describe the pre-intervention status of children's wellbeing and home environment; the conditions for learning within homes, communities and preschool classrooms in particular; households and communities access to education and health services as well as public infrastructure; and children's learning development. This information tells us about the context in which the intervention is being introduced and provides a starting point for us to gauge the level and type of changes observed across key aspects of the theory of change at endline.

3.1 Home Context: Child Wellbeing and Household Resources

In this section we describe participating children's physical well-being, household access to physical health services and parents' monitoring of their children's' overall health. Children's wellbeing and access to health supports are important contextual factors in our logic model. Children who are unwell are likely stay home from preschool. When they do come to school, undernutrition and illness can hinder their ability to take part in learning.

Children's Physical Wellbeing

Parents were asked to rate their child's overall heath and about recent issues with their child's wellbeing. As shown in Exhibit 7, most parents rated their children's physical health as good. Less than 1 percent of the children were rated as being in bad or very bad health.

Exhibit 7. Children's Overall Physical Health.

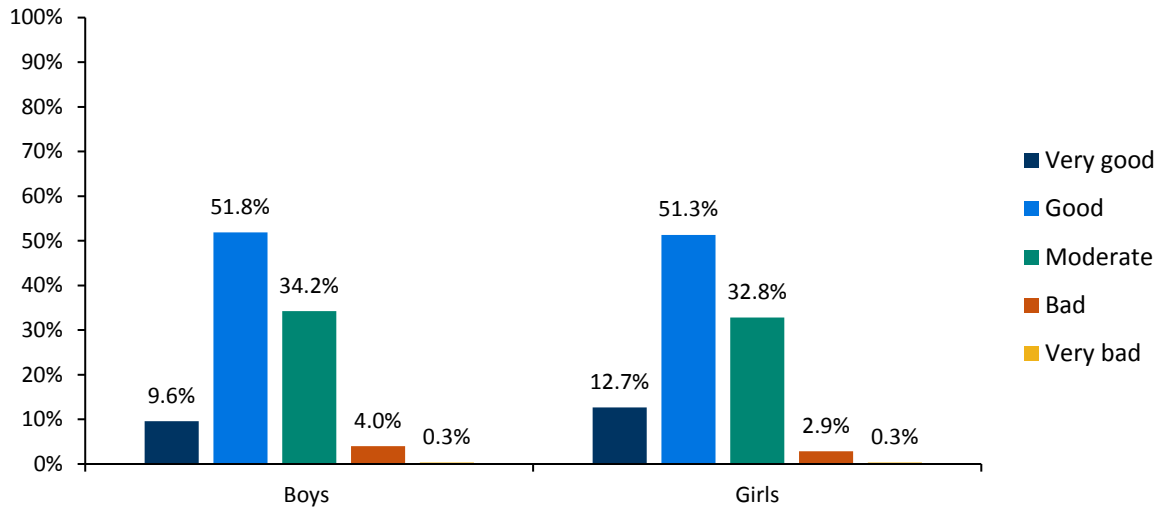
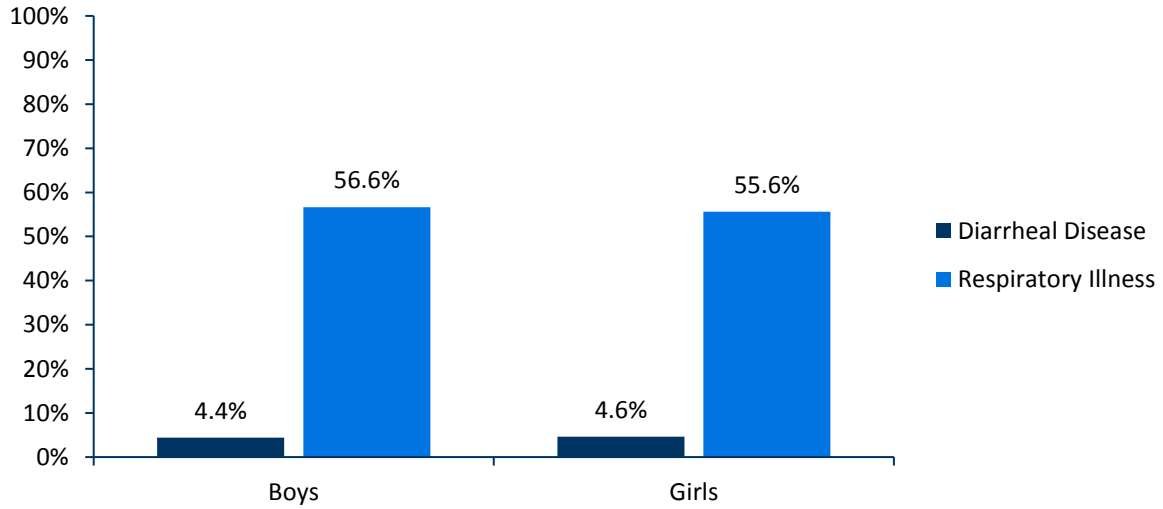


Exhibit 8 shows that while diarrheal disease was uncommon among the study children, but just over half had recently experienced a respiratory illness.

Exhibit 8. Children's Recent Illnesses.



Household Access to Supports for Child's Physical Wellbeing

Parents were also asked about their access to health support services for their child. As shown in Exhibit 9, most children live less than a 20 minutes' walk away from closest health center.

Exhibit 9. Household Distance to Health Center.

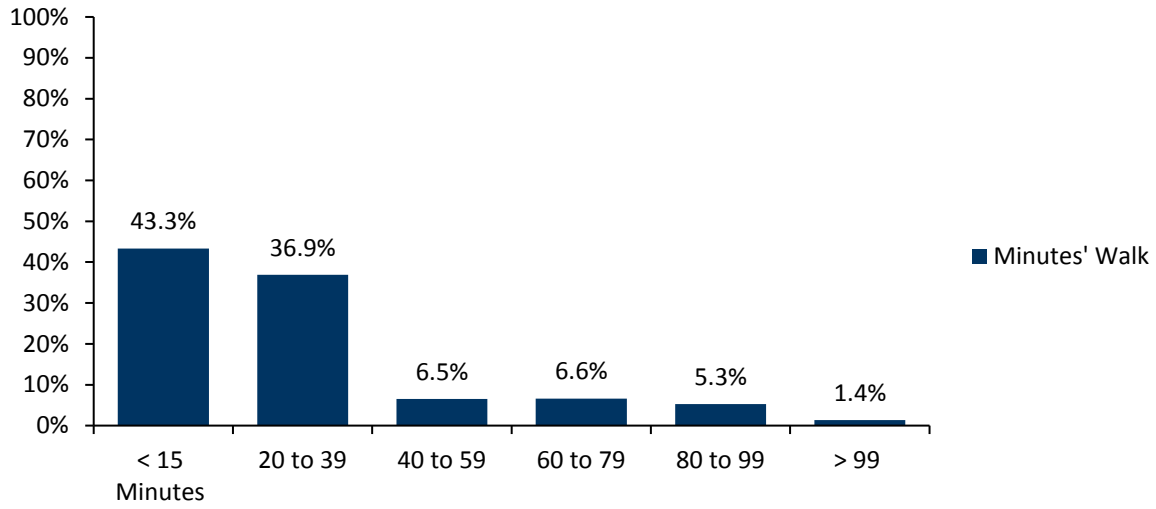
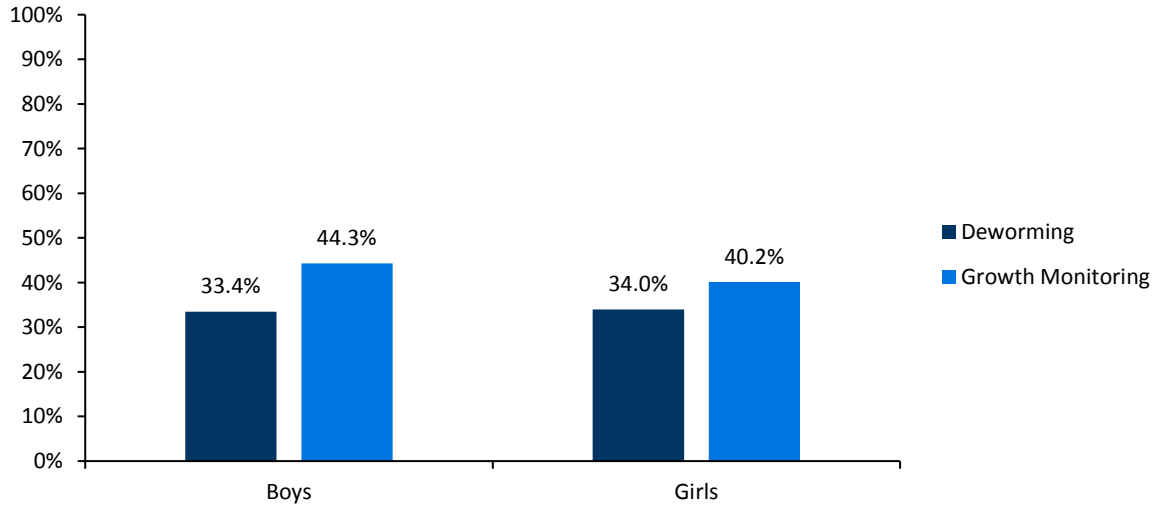


Exhibit 10 shows that 33.4 percent of the participating boys and girls had been dewormed in the past 6 months, less than half had had growth monitoring within the past 12 months.

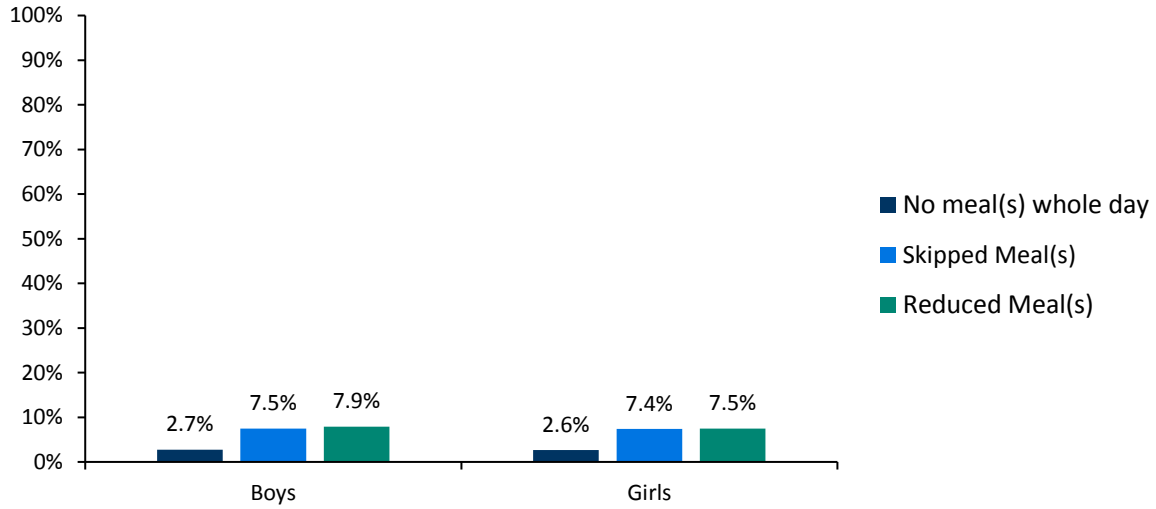
Exhibit 10. Rates of Deworming and Growth Monitoring.



Household Food Insecurity

As shown in Exhibit 11, rates of food insecurity were very low among the study children. The items displayed here show the percentage of households where, in the past month, any child (1) went a whole day without a major meal, (2) skipped one or more meals due to inadequate food availability, or (3) ate reduced-sized meals due to insufficient food available.

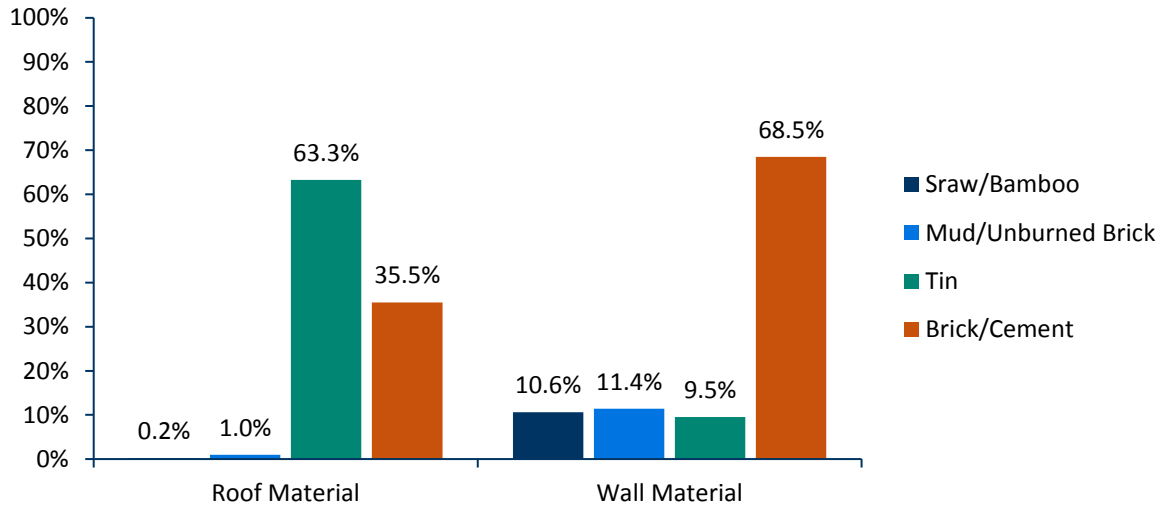
Exhibit 11. Rates of Household Nutritional Insecurity.



Household Infrastructure

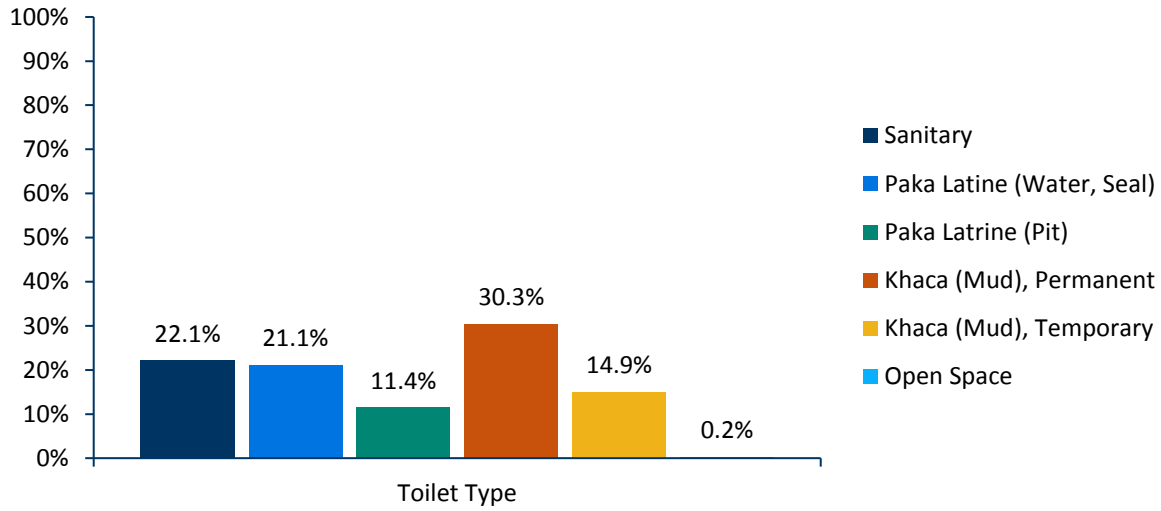
Nearly all study children's homes (98.3 percent) had electricity. For water, 98.2 percent of households depended on tube wells. As shown in Exhibit 12, most children lived in homes constructed of durable materials.

Exhibit 12. Household Construction.



As shown in Exhibit 13, households had a variety of types of toilet facilities.

Exhibit 13. Household Toilet Facilities.



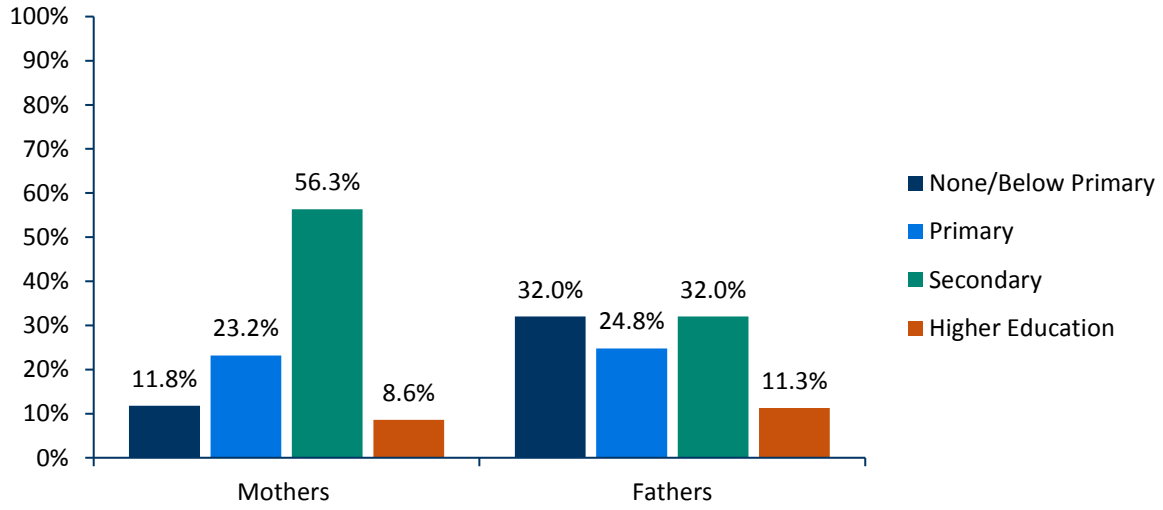
3.2 Home Context: Household Educational Environment

In this section we describe participating children's home context looking specifically at their parent's education levels and abilities as well as other factors that support and encourage children's learning within the home. The household's educational environment and the support children receive from their parents and other adults in learning are important potential predictors of attainment and performance in preschool. Educated parents often show more interest in their children's education and learning which can increase these children's performance in school.

Parental Education

Parents were asked what the highest level of education they had completed was as well as whether they could read or write. We found the overall level of education in project communities to be relatively high, and mothers tended to be more educated than fathers. Literacy rates were 83.9 percent for mothers, and 64.6 percent for fathers. Exhibit 14 shows the highest educational level completed by mothers and by fathers.

Exhibit 14. Parental Education Levels.



Presence of Out-of-School Children in the Home

Parents were asked how many children lived in their home ages 7 to 10 years, and how many ages 11 to 15 years. If parents indicated having any children in those age ranges, they were then asked how many of those children were currently enrolled in school. There were very few out-of-school children in the study households, with a rate of 0.4 percent among children ages 7 to 10 and 1.5 percent for ages 11 to 15 years.

Presence of Reading Materials in the Home

In addition to parents' levels of education and out of school children, we also inquired whether children had access to reading materials at home. As shown in Exhibit 15, most households had reading materials, with almost half having storybooks or picture books for children.

Exhibit 15. Types of Reading Material Present in Study Households.

Type of Reading Material	Percentage Have
Storybooks or Picture Books for Children	46.9
Textbooks	70.6
Religious Books	79.1
Magazines	2.9
Newspapers	5.4
Coloring Books	14.3
Comic Books	3.0

Presence of Toys in the Home

Parents were also asked about the presence of toys or play materials in the home. As shown in Exhibit 16, nearly all study children had access to manufactured toys, household objects, and objects found outside. Fewer children had access to educational play materials.

Exhibit 16. Types of Play Materials Available in Households.

Type of Play Material	Percentage Have
Homemade Toys, Such as Stuffed Dolls, Cars, or Other Toys Made at Home	82.8
Toys from a Shop or Manufactured Toys	96.2
Household Objects, Such as Bowls, Cups or Pots	91.9
Objects Found Outside, Such as Sticks, Stones or Leaves	93.2
Drawing or Writing Materials	38.7
Puzzles (Even a Two-Piece Puzzle Counts)	6.8
Two or Three-Piece Toys that Require Hand-Eye Coordination	48.6
Toys that Teach About Colors, Sizes or Shapes	18.8
Toys or Games that Help Teach About Numbers/Counting	22.9

Stimulation in the Home for Child Development

We also inquired whether any household member age 15 or older engaged in various stimulating activities with participating children at home in the past week. As shown in Exhibit 17, most study children were receiving home-based stimulation for their learning and development.

Exhibit 17. Study Child Participation in Activities with Household Member, Past Week.

Type of Activity	Percentage Did Past Week
Read Book	68.5
Told Stories	67.5
Sang Songs/Lullabies	64.2
Took Child Outside	73.3
Played Simple Games	51.6
Named Objects or Drew	76.7
Showed or Taught Something New	56.3
Taught the Alphabet or Encouraged to Learn Letters	79.2
Played a Counting Game or Taught Numbers	52.1

Finally, we also asked families about positive and negative kinds of socio-emotional interaction with their child as provided by an adult in the household age 15 or older, in the past week. As shown in Exhibit 18, nearly all children had an adult caregiver who hugged or showed them affection at home. However, most children had also experienced one or more negative behavior management strategies.

Exhibit 18. Socio-Emotional Interaction Past Week.

Type of Social Support	Percentage Did Past Week
Hugged or Showed Affection	94.5
Spanked for Misbehavior *(negative)*	35.2
Hit for Misbehavior *(negative)*	47.0
Criticized or Yelled At *(negative)*	62.9

3.3 School Context: Conditions for Learning

In this section, we describe the learning conditions provided by EYPP schools in the treatment sample. We gathered information on water, sanitation and hygiene as well as classroom infrastructure and learning resources available within classrooms. These contextual factors are important because classroom infrastructure and learning resources can have positive or negative effects on teaching and preschool attendance depending on their availability and condition.

School Water and Sanitation

For WASH to benefit students and staff, there must be appropriate infrastructure allowing students and staff to engage in behavior that promotes positive hygiene and sanitation. In 98 percent of EYPP schools, children have access to clean drinking water always or almost always. In addition, 98 percent had functioning, sanitary latrines.

Classroom Infrastructure

Pre-primary classroom infrastructure was in good or somewhat good condition for most schools in the EYPP sample. Seventy-six percent had a solid roof that fully covered the classroom, 84 percent had electricity always or almost always, and 82 percent always or almost always had a working fan.

Classroom Learning Resources

We also collected information on the availability of play and learning material within EYPP classrooms. As shown in Exhibit 19, nearly all classrooms had some sort of play material at their disposal, the most widely available being building blocks which were present in 92 percent of classrooms. Only two schools had no available play materials.

Exhibit 19. Types of Play Materials Present in Treatment Group Schools.

Type of Play Material	Percentage Have
Pretend Play Materials	62.0
Puzzles	66.0
Building Blocks	92.0
Puppets/Dolls	54.0

In terms of learning resources, books and materials for learning numbers and vocabulary were available in the majority of EYPP classrooms. Most had books and/or art supplies, and over 90 percent had materials for learning numbers and vocabulary (Exhibit 20).

Exhibit 20. Teaching and Learning Materials Present in Treatment Group Schools.

Type of Play Material	Percentage Have
Books	84.0
Art Supplies	72.0
Materials to Teach Mathematics/Numbers	90.0
Materials to Teach Vocabulary/Literacy	94.0

3.4 Community Context: Community Resources

In this section, we describe conditions within sampled communities looking specifically at access to public infrastructure such as roads and electricity as well as health services. These community level background factors are important because they provide information on external factors that could affect parents' decision to enroll their children in pre-school.

Community Infrastructure

Most villages had good road infrastructure, with 97 percent connected to an all-weather or *pacca* road. All villages had access to electricity 16 or more hours per day, but only about one in three had electricity for more than 20 hours a day.

Community Access to Health Care

In terms of access to health care facilities, 22 percent of villages are located within a 30-minute walk of the nearest district hospital, and 51 percent age within a 30-minute walk of an *upazila* health complex.

School-Based Support Programming

We collected information on the presence of nutrition, WASH and school supplies provision programs within EYPP schools. No schools were taking part in nutrition or school feeding programs. However, 6 percent of schools were involved in a WASH program and 80 percent provided school supplies to students whose families had difficulty affording them.

3.5 Children's Baseline School Readiness

Children's baseline school readiness was measured using the IDELA, as described above in section 2.5.

Gross and Fine Motor Development

This domain was measured using four items with a maximum possible score of 100. The mean score was 42.28 (SD = 27.58). Out of all the children, 42 percent scored more than the passing score of 50. Furthermore, only 1.7 percent of the children received the maximum score.

Emergent Literacy and Language

This domain was measured using six items with a maximum possible score of 100. The mean score was 28.95 (SD = 19.43). Out of all the children 13.5 percent scored more than the passing score of 50. Furthermore, only 0.1 percent of the children received the maximum score.

Numeracy

This domain was measured using seven items with a maximum possible score of 100. The mean score was 35.04 (SD = 17.58). Out of all the children 19.6 percent scored more than the passing score of 50. Furthermore, no children received the maximum score.

Social-Emotional Development

This domain was measured using five items with a maximum possible score of 100. The mean score was 31.21 (SD = 18.27). Out of all the children 15 percent scored more than the passing score of 50. Furthermore, only 0.1 percent of the children received the maximum score.

Executive Function

This domain was measured using two items with a maximum possible score of 100. The mean score was 49.36 (SD = 30.82). Out of all the children 48 percent scored more than the passing score of 50. Furthermore, 5.5 percent of the children received the maximum score.

Approaches to Learning

This domain was measured using six items with a maximum possible score of 100. The mean score was 55.50 (SD = 28.49). Out of all the children 65.9 percent scored more than the passing score of 50. Furthermore, 7.8 percent of the children received the maximum score.

3.6 Baseline Equivalence

The primary purpose of the baseline data collection is to measure the starting point for everyone in the sample and check that the treatment and control conditions are balanced before the start of the intervention. In theory, randomization should lead to a balance of outcome and control indicators between the two groups, but due to chance this may not always happen. Therefore, we use tests of differences between treatment and control conditions to determine whether randomization led to a balanced sample.

This section reports the mean differences at baseline for primary outcomes (test scores) and control variables (household characteristics) between the treatment group and the control group. The means and the p-values of the t-tests for these variables are given in Exhibit 21 and

Exhibit 22, respectively. The balance tables provide a strong indication that randomization worked well in terms of creating equivalent groups at baseline—that is, the average characteristics of treatment and control groups were statistically equivalent. We tested all the outcome measures and control variables for statistical differences between the two groups, using t-tests of differences in means across groups. None of the 20 variables analyzed here were statistically significantly different.

Exhibit 21. Baseline Equivalence.

	(1) Control		(2) Treatment		t-test (1)-(2)
Variable	**N/[Clusters]**	**Mean/[SE]**	**N/[Clusters]**	**Mean/[SE]**	***p*-value**
Number of Household Members	864 [50]	4.678 [0.070]	992 [51]	4.768 [0.066]	0.350
Mother Can Read	862 [50]	0.835 [0.016]	988 [51]	0.845 [0.014]	0.640
Mother Can Write	862 [50]	0.835 [0.015]	987 [51]	0.851 [0.013]	0.435
Father Can Read	864 [50]	0.644 [0.023]	986 [51]	0.650 [0.019]	0.826
Father Can Write	864 [50]	0.648 [0.023]	986 [51]	0.661 [0.019]	0.660
Children Ages 7 to 10 Years in Home	864 [50]	0.257 [0.016]	992 [51]	0.267 [0.019]	0.679
Children Ages 7 to 10 Years in School	864 [50]	0.253 [0.016]	992 [51]	0.264 [0.019]	0.663
Children Ages 11 to 15 Years in Home	864 [50]	0.366 [0.020]	992 [51]	0.356 [0.019]	0.719
Children Ages 11 to 15 Years in School	864 [50]	0.363 [0.020]	992 [51]	0.342 [0.017]	0.416

	(1) Control		(2) Treatment		t-test (1)-(2)
Number of Rooms in the Home	863 [50]	2.457 [0.055]	992 [51]	2.500 [0.044]	0.540
Household Has Electricity	864 [50]	0.986 [0.003]	992 [51]	0.980 [0.005]	0.323
Monthly Food Expenditure (*Taka*)	864 [50]	7095.544 [186.074]	991 [51]	7128.507 [200.607]	0.904
Monthly Education Expenditure (*Taka*)	561 [50]	1396.827 [94.609]	687 [51]	1541.805 [96.962]	0.285
F-test of Joint Significance (*p*-Value)					0.645
F-test, Number of Observations					1240

Note: Standard errors are clustered by community. ***, **, and * indicate significance at the 1, 5, and 10 percent level.

Exhibit 22. Balance in IDELA Scores Between Treatment and Control Groups.

	(1) Control		(2) Treatment		t-test (1)-(2)
Variable	**N/[Clusters]**	**Mean/[SE]**	**N/[Clusters]**	**Mean/[SE]**	***p*-value**
Domain Score: Motor Development	864 [50]	41.646 [1.372]	992 [51]	43.018 [1.121]	0.437
Domain Score: Emergent Literacy	864 [50]	28.649 [1.209]	992 [51]	29.212 [1.047]	0.724
Domain Score: Emergent Numeracy	864 [50]	34.581 [1.078]	992 [51]	35.446 [1.205]	0.592
Domain Score: Social and Emotional	864 [50]	30.295 [0.996]	992 [51]	32.002 [0.968]	0.219
Domain Score: Executive Function	864 [50]	48.047 [1.609]	992 [51]	50.504 [1.954]	0.332
Domain Score: Approaches to Learning	864 [50]	55.015 [1.734]	992 [51]	55.914 [1.531]	0.698
Total IDELA Score	864 [50]	33.793 [1.049]	992 [51]	34.920 [0.969]	0.429
F-test of Joint Significance (p-Value)					0.786
F-test, Number of Observations					1856

Note: Standard errors are clustered by community. ***, **, and * indicate significance at the 1, 5, and 10 percent level.

4. Conclusions

Recruitment of participants and baseline data collection went smoothly, with no significant issues or concerns.

4.1 Study Sample

We had a high recruitment rate of 97.5 percent of the children identified for inclusion in the sample. All program communities and EYPP schools that were in the sample participated in baseline data collection.

Overall, schools and communities were relatively well resourced. Schools had WASH facilities, EYPP classrooms had teaching and learning materials, and communities had all-weather roads, utilities, and health services. Schools did not provide school feeding, but most did help families who needed things like school supplies so their child could attend school.

Most participating households had one or more parents who were literate, most had reading materials (books, etc.) and toys for children, and nearly all had a secure food supply. Children were in good health overall, although there were high rates of respiratory illness. Most families had access to health care facilities.

Nearly all children received support at home for their learning and development, with adults playing with them or interacting in other positive ways (e.g., singing songs with them). On the down side, most children experienced negative forms of discipline at home (criticism, being hit, etc.). Children had some school readiness, but also room for considerable growth.

4.2 Study Limitations and Mitigation Measures

Thus far, there have not been any significant limitations or issues in terms of carrying out this study.

Some families were difficult to reach because baseline was conducted during a school break, and some families were away visiting relatives. The data collection team was typically able to address this issue by returning to the home to try again. We expect that when midline is conducted in one year, we will likely face similar issues (because it will be the same time of year). So we will plan to start the midline data collection a month earlier than previously planned (November 2018 rather than December 2018), and again will make repeated attempts to reach any families who are not initially available.

Some children were shy and easily overwhelmed by the child assessment. For the follow-up data collection, we will (1) use female data collectors if possible, especially with children who were very shy at baseline, (2) train data collectors to ensure adequate warm-up time with the

children, and (3) continue to discourage others (neighbors, siblings, etc.) from watching the child while he/she was completing the assessment.

4.3 Next Steps

The next step for this study will be the midline data collection, expected to start in November 2018. Prior to launch of data collection, we will update assessment tools, and revisit and update field work plans. We will also collaborate so that Save the Children provides AIR with required implementation data, and will continue to work with the World Bank to support a cost analysis for this intervention.

Appendix A. Group Assignment

Table A-1. Treatment Group Assignment by Upazila and Union

	Treatment Schools	Control Schools
Gagni Upazila		
Bamundi	1	1
Dhankhola	4	5
Kathuli	2	2
Kazipur	2	2
Mothmura	3	3
Roypur	1	1
Shaharbati	4	3
Sholotaka	3	4
Tatulbaria	2	2
Meherpur Sadar Upazila		
Amdah	2	1
Amjhupi	2	2
Buripota	3	2
Kutubpur	4	4
Municipality 1	4	4
Pirojpur	4	5
Mujibnagar Upazila		
Bagoan	3	3
Dariapur	2	2
Mohajanpur	2	3
Monakhali	2	1

Appendix B. Recruitment and Baseline Participation by School

Table B-1 shows the number of children in the original sample list for recruitment, and the number and percentage who were recruited into the study and participated in baseline (all recruited families also took part in baseline).

Table B-1. Recruitment and Baseline Data Collection by School

	Intended Sample	Recruited Sample
Gagni Upazila Schools		
Terail Chairmanpara Govt. Primary School	19	19 (100%)
Arpara Purbapara Govt. Primary School	13	13 (100%)
Ber Govt. Primary School	22	22 (100%)
Chandamari Govt. Primary School	22	20 (90.1%)
Dhapa Govt. Primary School	21	19 (90.5%)
Kharampur Govt. Primary School	18	17 (94.45)
Mohishakhola Govt. Primary School	25	25 (100%)
Kathuli Paschimpara Govt. Primary School	13	13 (100%)
Radhagobindopur Govt. Primary School	16	16 (100%)
Pirtola Govt. Primary School	25	25 (100%)
Sahebnagar Dakkhinpara Govt. Primary School	21	21 (100%)
Akubpur Govt. Primary School	22	22 (100%)
Chatian Govt. Primary School	25	25 (100%)
Kodalkati Govt. Primary School	20	20 (100%)
Bhomordaho Govt. Primary School	15	15 (100%)
Coloney Para Govt. Primary School	19	18 (94.7%)
Hizolbaria Dakkhin Govt. Primary School	15	15 (100%)
Manikdia Kosbanagar Govt. Primary School	11	11 (100%)
Minapara Govt. Primary School	25	25 (100%)
Shimultola Govt. Primary School	14	12 (85.7%)

	Intended Sample	Recruited Sample
Sohorbaria Govt. Primary School (Paschim)	16	16 (100%)
Vorat Govt. Primary School	25	24 (96.0%)
Doyerpara Govt. Primary School	16	15 (93.8%)
Ovaynagar and Bholardar Govt. Primary School	17	17 (100%)
Vatpara Govt. Primary School	22	21 (95.5%)
Jalshuka Govt. Primary School	19	17 (89.5%)
Juginda Shakpara Govt. Primary School	25	25 (100%)
Kasbab DPP Govt. Primary School	10	10 (100%)
2 No. Kutubpur Govt. Primary School	15	15 (100%)
Tangramari Govt. Primary School	10	10 (100%)
Bhobanipur Govt. Primary School	25	23 (92.0%)
Harabhanga Mollapara Govt. Primary School	19	19 (100%)
Mohammadpur Govt. Primary School	15	15 (100%)
Mothmura Moddhopara Govt. Primary School	24	22 (91.7%)
Shindurkota Govt. Primary School	19	19 (100%)
Karaigachy Govt. Primary School	20	20 (100%)
Ebadotkhana Govt. Primary School	14	13 (86.7%)
Saharbati Govt. Primary School	23	23 (100%)
Saharbati Dakkhin Para Govt. Primary School	22	22 (100%)
Durlovpur Govt. Primary School	15	15 (100%)
Bholadanga Govt. Primary School	14	13 (86.7%)
Changara Paschimpara Govt. Primary School	22	22 (100%)
Sohorabaria Govt. Primary School	9	9 (100%)
Kollyanpur Moddhopara Govt. Primary School	18	16 (88.9%)
Polashipara Purbopara Govt. Primary School	25	25 (100%)

	Intended Sample	Recruited Sample
Meherpur Sadar Upazila Schools		
Bhobonondapur Govt. Primary School	5	5 (100%)
Amjhupi Uttarpara Govt. Primary School	11	10 (90.9%)
Islamnagor Govt. Primary School	22	22 (100%)
Govipur Madrasa	25	24 (96.0%)
Ichakhali Govt. Primary School	21	21 (100%)
Radhakantopur Govt. Primary School (Com. based)	18	18 (100%)
Radhakantopur Govt. Primary School (Sch. based)	7	7 (100%)
Boikuntopur Govt. Primary School	11	11 (100%)
Kulbaria Govt. Primary School	25	25 (100%)
Shibpur Govt. Primary School	19	19 (100%)
Solmari Balika Govt. Primary School	20	20 (100%)
Dighirpara Govt. Primary School	22	22 (100%)
Poshuhutpara Govt. Primary School	25	25 (100%)
S M Govt. Primary School Govt. Primary School	25	23 (92.0%)
Hasnabad Govt. Primary School	20	18 (90.0%)
Kathalpota Dakkhin Govt. Primary School	15	15 (100%)
Mominpur Govt. Primary School	25	25 (100%)
Pirojpur Westpara Govt. Primary School	25	24 (96.0%)
Rajnagar Govt. Primary School	25	21 (84.0%)
Bamonpara Govt. Primary School	25	23 (92.0%)
Islampur Govt. Primary School	24	23 (92.0%)
Gandharajpurpara Govt. Primary School	13	13 (100%)
Khoksha Govt. Primary School	25	23 (92.0%)
Bajitpur Govt. Primary School	11	11 (100%)
Jha Govt. Primary School	6	6 (100%)

	Intended Sample	Recruited Sample
Kamdebpur Govt. Primary School	12	12 (100%)
Kaligangni Govt. Primary School	7	7 (100%)
Kutubpur Govt. Primary School	17	17 (100%)
Nischintopur Govt. Primary School	10	10 (100%)
Rudronagar Govt. Primary School	15	15 (100%)
Pouro Govt. Primary School	21	20 (95.2%)
Borobazar Govt. Primary School	21	18 (85.7%)
Notunpara Govt. Primary School	25	24 (96.0%)
Sheikhpara Govt. Primary School	17	17 (100%)
Bolierpur Purbopara Govt. Primary School	25	25 (100%)
Borshibaria Govt. Primary School	22	22 (100%)
Goharpur Govt. Primary School	22	22 (100%)
Juginda Govt. Primary School	11	10 (90.9%)
Mujibnagar Upazila Schools		
Bagoan Govt. Primary School	25	25 (100%)
Joypur Govt. Primary School	20	20 (100%)
Najirakona Govt. Primary School	23	23 (100%)
Taranagoar Govt. Primary School	25	25 (100%)
Gowrinagor Govt. Primary School	25	25 (100%)
Mohisnagar Govt. Primary School	23	23 (100%)
Gopalpur Shout Govt. Primary School	21	21 (100%)
Bhabanipur Govt. Primary School	23	23 (100%)
Monakhali Govt. Primary School	25	25 (100%)
Anandabash South Govt. Primary School	18	18 (100%)
Kadargonj Govt. Primary School	20	19 (95.0%)
Mazpara Govt. Primary School	13	12 (92.3%)

	Intended Sample	Recruited Sample
Dariapur Boys Govt. Primary School	15	15 (100%)
Khanpur Govt. Primary School	22	22 (100%)
Komorpur Paschim Govt. Primary School	21	20 (95.2%)
Mohajanpur Govt. Primary School	25	25 (100%)
Ramnagar Govt. Primary School	11	10 (90.9%)
Shibpur Darul Quran Madrasha	13	13 (100%)

Appendix C. Recruitment Script

Note: *You must read this entire consent form aloud exactly as written.*

Hello, my name is (data collector name). I work for a company called Data International. I am here to ask you and your child to participate in a study about how to help children in Bangladesh get a good start in primary school. Please let me tell you more about the study, and then you can tell me whether you give permission for your family and your child to participate.

Save the Children works with the Ministry of Education to provide a program called the Early Years Preschool Program in some communities. Our company is working with the American Institutes for Research (AIR), USA to find out whether an additional year of preschool helps children learn better. We are asking you and your child to take part in the study because you live in a community that is in the study.

What would we ask your child to do? We would ask him/her to do some play activities with us to show us what he/she is learning. These activities should take less than an hour, and most children find them to be fun. We would like to do these kinds of activities with your child three times: once now, once about a year from now (end of 2018), and once two years from now (end of 2019).

What would we ask you to do? We ask you some questions about your child, home and family now. You will not have to answer any questions that you do not wish to answer, and you can stop answering questions at any time. We expect these questions to take less than one hour.

Once your child starts school, we would also ask your permission for us to review your child's school records regarding his/her attendance and learning.

Your family's personal information and your child's personal information will never be shared with anyone in his/her school or this community. The information will only be used by researchers. Your family's names or your child's name will never be used in any reports about this study.

Nothing bad will happen to your child or your family if you decide that you do not want to participate in this study. You and your child can also decide to stop participating in the study later if you want.

Your family and your child will not get any special benefits from being in the study, but we hope that this study will help us learn how to improve education for children in Bangladesh.

Do you have any questions about the study or about what I have read to you?

Answer all of parent's/guardian's questions and make sure he/she has no further questions before asking whether or not consent is given.

May I please have your permission for your child to participate in this study of the Early Years Preschool Project?

Instructions to data collector: *Complete the verification of consent form, indicating the full name of the parent/guardian, and whether he/she gives consent. If consent is not given, try to learn more about the parent's/guardian's concerns – you may be able to address them and still gain consent. If consent is not given, note the stated reason for refusal if possible. However, the parent/guardian should never be forced to provide a reason if he/she says no to the study.*

Parent/Guardian's Full Name: _____

Relationship to Child: Natural/biological mother

Natural/biological father

Step-mother or adoptive mother

Step-father or adoptive father

Grandmother

Grandfather

Aunt

Uncle

Other relative

Other non-relative

Does parent/guardian give consent? (circle one) Yes No

If parent/guardian does <u>not</u> give consent, try to learn the reason for refusal and note it here: _____

_____

_____

If parent gives consent, say: I am going to leave this piece of paper with you that tells you how to contact our study team if you have any questions later, or if you decide later that you do not want to be in the study. [*Give parent study contact page*]

Data Collector's Signature: _____ Data Collector ID: _____

Date: _____/_____/_____

Appendix D. Assessment Tools

IMPACT EVALUATION OF EARLY YEARS PRESCHOOLPROGRAM 2017
Household Questionnaire

PART 1: General Family Information

1. What is your child's name?	
2. What is the sex of your child?	❒Girl ❒Boy
3. Date of Birth of child:	Year_____ Month_____ Day:_____
4. How old is your child?	Years_____ Months_____
5. What is your full name?	
6. How are you related to the child?	❒Mother (1) ❒Father (2) ❒Grandparent (3) ❒Older brother/sister (4) ❒Other caregiver (5) Specify (5A): _____
7. How many family members live in this household (eat out of the same pot)?	
8. What is the mother's full name?	
9. What is the mother's age?	
10. What is the highest level of education that the mother has completed?	❒None/Not completed primary (0) ❒Completed Primary (1) ❒Completed Secondary (2) ❒Completed Higher education (3) ❒Don't know (99)
11. Can the mother read?	❒Yes (1)❒No (0) ❒Don't know (99)
12. Can the mother write?	❒Yes (1)❒No (0) ❒Don't know (99)
13. What is the father's full name?	
14. What is the father's age?	
15. What is the highest level of education that the father has completed?	❒None/Not completed primary (0) ❒Completed Primary (1) ❒Completed Secondary (2) ❒Completed Higher education (3) ❒Don't know (99)

16. Can the father read?	❒Yes (1)❒No (0) ❒Don't know (99)
17. Can the father write?	❒Yes (1)❒No (0) ❒Don't know (99)
18. What is the number of 7-10-year-old children in the family?	
19. Number of 7-10-year-old children in the family attending school?	
20. What is the number of 11-15-year-old children in the family?	
21. Number of 11-15-year-old children in the family attending school?	

PART 2: Home Environment / Parenting Practices

1. Do you have any of the following types of other reading materials at home?			
	❒Yes (1)	❒No (0)	❒Don't know (99)
a. Story/picture books for young children?			
If yes, how many books?			
b. Textbooks?			
c. Magazines?			
d. Newspapers?			
e. Religious books?			
f. Coloring books?			
g. Comics?			
2. I am interested in learning about the things that your child plays with when s/he is at home. Does s/he play with:			
a. Homemade toys, such as stuffed dolls, cars, or other toys made at home?			
b. Toys from a shop or manufactured toys?			
c. Household objects, such as bowls, cups or pots?			
d. Objects found outside, such as sticks, stones or leaves?			
e. Does your child have any drawing or writing materials?			
f. Does child have any puzzles (even a two-piece puzzle counts)?			
g. Does your child have any two or three-piece toys that require hand-eye coordination?			
h. Does child have toys that teach about colors, sizes or shapes?			
i. Does child have toys or games that help teach about numbers/counting?			
j. Others			

3. In the past week, did you or any other family member older than 15 years engage in these activities with <<insert child's name>>? Note: ask "Who?" if the answer is "yes". – *tick as many as appropriate*	Yes (1)	No (0)	Mother (2)	Father (3)	Other caregiver (4)
a. Read books or look at pictures books with child?					
b. Tell stories to the child?					
c. Sing songs to or with the child, including lullabies?					
d. Take the child outside the home? For example, to the market, visit relatives.					
e. Play with the child any simple games?					
f. Name objects or draw things to or with the child?					
g. Show or teach your child something new, like teach a new word, or teach how to do something?					
h. Teach alphabet or encourage to learn letters to the child?					
i. Play a counting game or teach numbers to the child?					
j. Hug or show affection to your child?					
k. Spank your child for misbehaving?					
l. Hit your child for misbehaving?					
m. Criticize or yell at your child?					

4. I would like to know about how your child spends his/her day.	
a. On a regular day, how many hours does the mother spend time talking, walking, and/or playing with the child?	
b. On a regular day, how many hours does the father spend time talking, walking, and/or playing with the child?	
c. On a regular day, how many hours the child spend in the care of another child who is less than 10 years old?	
d. On a regular day, how many hours does the child spend alone?	

PART 3: Socio-economic background

1. How many rooms does your house have?	
2. Does your community have electricity?	❒Yes (1)❒No (0) ❒Don't know (99)
3. Does your household have electricity?	❒Yes (1)❒No (0) ❒Don't know (99)
4. What kind of roof does your house have?	❒ Straw, bamboo, polythene, plastic, canvas (1) ❒ Mud, unburned brick (2) ❒ Tin (CI sheet) (3) ❒ Wood (4) ❒ Brick, Cement (5) ❒ Other (specify) (6)

5. What kind of walls does the main room of your house have?	❒Straw, bamboo, polythene, plastic, canvas (1) ❒Mud, unburned brick (2) ❒Tin (CI sheet) (3) ❒ Wood (4)	❒Brick, Cement (5) ❒Other (specify) (6)

6. What kind of toilet facilities do members of the house typically use?	❒ Sanitary (1) ❒ Paka latrine (water, seal) (2) ❒ Paka latrine (pit) (3) ❒ Khaca (mud), permanent (4)	❒ Khaca (mud), temporary (5) ❒ Open space, no latrine (6)

7. What is the main source of drinking water for the household?	❒ Supply (1) ❒Tube well (2) ❒Pond, river (3) ❒ Well (4)	❒ Waterfall, spring (5) ❒Other (specify) (6)

Part 4: Food Security Scale (Under 14 Years
These next questions are about the food eaten in your household in the last month and whether you were able to afford the food you need.

SL.	Questions	Code
1	In the last month, did it happen that any child of your household did not eat any major meal during the whole day because there wasn't enough money to buy food? Code: 1= Almost every day; 2= Occasionally; 3 = Once or twice; 4= Never	
2	In the last month, did it happen that any child of your household skipped a meal because there wasn't enough money to buy food? Code: 1= Almost every day; 2= Occasionally; 3 = Once or twice; 4= Never	
3	In the last month, did it happen that any child of your household reduced the usual size of daily meals because there wasn't enough money to buy food? Code: 1= Almost every day; 2= Occasionally; 3 = Once or twice; 4= Never	

Part 5: Monthly Expenditure (New)

1	2	3
Household Food Expenditure (in Taka)	Household Education Expenditure (in Taka)	Household Other Expenditure (in Taka)

Part 6: Health Status

1. In general, would you say that your child's health is?

Very good	1
Good	2
Moderate	3
Bad	4
Very bad	5
Unsure	88
Refused	99

2. In the last 6 months, has [child name] received deworming?

Yes	1
No	2
Unsure	88
Refused	99

3. In the past 2 weeks, has [child name] had diarrhea, defined as loose stools more than 3 times per day?

Yes	1
No	2
Unsure	88
Refused	99

4. In the past 2 weeks, has [child name] had cough or difficulty breathing?

Yes	1
No	2
Unsure	88
Refused	99

5. If you had to walk, how long would it take you to go from your home to the closest health clinic that you would use if your child was sick?

Hours: Minutes	:
Unsure	88
Refused	99

6. When was the last time that [study child name] was weighed for growth monitoring?

Less than 1 month ago	1
1-3 months ago	2
3-6 months ago	3
6-12 months ago	4
Longer than 12 months ago or never weighed	5
Unsure	88
Refused	99

IMPACT EVALUATION OF EARLY YEARS PRESCHOOLPROGRAM 2017

School Observation Questionnaire

Identification

Ques. SL	Item	Answer
V1	1=Treatment; 2= Control	
V2	Name of School	
V3	Name of Union	
V4	Name of Interviewer	
V5	Date of Interview	
V6	Name of Upazila	

Observation

Ques. SL	Item	Response Options	Notes
O1	Are the EYPP classroom and any outdoor play areas used by EYPP students safe?	1=Yes	No safety hazards present
		2=Partially	One or more minor safety hazards present that could injure a child but likely not seriously, such as broken glass, protruding nails, etc.
		3=No	One or more major safety hazards present that threaten the wellbeing of children, such as an uncapped well, busy road with no boundary, open body of water, structurally unsound classroom, etc.
O2	Does the EYPP classroom have a solid roof that protects children from the elements?	1=Yes	Roof is in good condition and children are fully protected from rain and sun while in class
		2=Partially	Some small holes in the roof but most of the classroom is projected (90% or more)
		3=No	More than 10% of the classroom roof is missing or damaged so that rain can come in
O3	Does the EYPP classroom have electricity?	1=Always or almost always	
		2=Sometimes	
		3=Never	
O4	Does the EYPP classroom have a working fan?	1=Always or almost always	
		2=Sometimes	
		3=Never	
O5	Do EYPP students have access to clean drinking water at school?	1=Always or almost always	
		2=Sometimes	Water is present but not all children have access
		3=Never	If children only have access to water from home, check “never”

O6	Are there functioning latrines within a five-minute walk of the EYPP classroom?	1=Yes, and sanitary	Latrine slab or walls are free from faeces or urine, no bad smell, no garbage, no bad smell
		2=Yes, but unsanitary	Faeces or urine on the latrine slab or walls, a bad smell, and/or garbage
		3=No	
	Does the EYPP classroom have…		
O7	Books?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O8	Puzzles?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O9	Blocks or other building toys?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O10	Puppets or dolls?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O11	Pretend play materials? (Toy animals, food, cars, etc.)	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O12	Art supplies?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O13	Posters, cards, small objects, or other materials that teach about numbers or mathematics?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable
O14	Posters, cards or other materials that teach vocabulary and/or literacy?	1=Yes	Present and usable
		2=No	Not present, broken, or otherwise unusable

IMPACT EVALUATION OF EARLY YEARS PRESCHOOL PROGRAM 2017

Community Questionnaire

Community Identification

V001	Area: 1=Treatment; 2= Control	
V002	School ID	
V003	Union	
V004	Upazila	
V005	Name of Interviewer	
V006	Date of Interview	

Interviewer:

This questionnaire is intended to capture community/village-level information. Please interview the school head unless unavailable.

A. Identification of Respondent

A001	Name of the school	
A002	Name of the respondent	
A003	Age	
A004	Gender:1 = Male; 2 = Female	
A005	Role: 1 = School Head, 2 = Senior Teacher, 3 = Other (specify)	
A006	Length of time resident in community: How many years have you been living in this village?	_____ years
A007	For how long you have been head (or senior teacher) of this school?	_____ years
A008	Mobile number	

B. Basic Infrastructure of the Community

	Question	Code	Answer
B001	What is the main access route to this village/mohalla?	1= All weather road/ pacca road/motor able; 2= Seasonal road/earthen 3= Waterway; 4= Path 5= Other	
B002	Is electricity available here?	1 = Yes; 2=No	
B003	How many hours per day on average is there electricity?	Number of hours	
B004	Is there mobile service?	1 = Yes; 2=No	
B005	Is there internet access within the community?	1 = Yes; 2=No	

C. Community Assets

SL	Facility	How far in km is [FACILITY] located from the Preschool center?	How many minutes does it take to go to [FACILITY] using the most common type of transportation?	Mode of transportation: 1=walking; 2=rickshaw/van 3= boat; 4=auto-rickshaw; 5=bicycle	Quality of services: 1= Satisfactory 2=Average 3=Not Satisfactory
C001	District Hospital				
C002	Upazila Health Complex				
C003	Community Clinic				
C004	Private clinic				
C005	NGO clinic				
C006	Union Council				
C007	Islamic school				
C008	Government High school				
C009	Non-Government High school				

Current project sat this school targeting Children (3-6 years)

SL	Projects	1=Yes; 2=No	Name of Organization	Legal Status
D001	School feeding or nutrition support			
D002	WASH Program			
D003	Provision of school supplies to households that cannot afford them (or to all households)			
D004	Other (specify)			
D005	Other (specify)			

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XXXX_MM/YY