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Bangladesh Early Years Preschool Program Impact Evaluation

Endline Report for the World Bank Strategic Impact Evaluation Fund

APRIL 2020

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Exhibits

Abbreviations and Acronyms

AIR	American Institutes for Research
ANCOVA	analysis of covariance
DD	difference-in-differences (design)
DMS	data management specialist
DPE	Directorate of Primary Education
EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
ES	effect size
EYPP	Early Years Preschool Program
GPS	Global Positioning System
IDELA	International Development and Early Learning Assessment
ITT	intent to treat
LATE	local average treatment effect
MDE	minimum detectable effect
MEAL	Monitoring Evaluation Accountability and Learning
RCT	randomized controlled trial
SMC	school management committee
WASH	water, sanitation, and hygiene

Acknowledgments

We would like to thank the families and children who welcomed our team and participated in this evaluation during the past 3 years.

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And thank you to the Save the Children field office staff from the sponsorship-funded Shishuder Jonno program in Meherpur for their support in carrying out this work.

তোমাদের সবাইকে ধন্যবাদ

Executive Summary

Coinciding with its economic growth in the past few decades, Bangladesh has rapidly improved many social indicators, including access to and quality of primary and pre-primary education. Bangladesh's National Education Policy 2010 includes a plan for 2 years of pre-primary education, starting with 1 year of pre-primary education in all primary schools and gradually growing into a 2-year program.[1] With its Early Years Preschool Program (EYPP), Save the Children has been providing the additional year of preschool to 4-year-old children, who then progress to the 1-year government pre-primary class at age 5 and Grade 1 at age 6. With funding from the World Bank, the American Institutes for Research carried out an impact evaluation of the EYPP. Here, we report the results from the endline survey and incorporate information from the baseline (2018) and midline (2019) reports.

The Early Years Preschool Program

Save the Children supervises and monitors the implementation of the EYPP, a program typically implemented for 2 hours per day in government primary schools in pilot communities in Meherpur and Barisal. The program uses the existing pre-primary classroom and teacher, but has a different curriculum and materials and meets at a different time of the day. The purpose of the EYPP is to serve children who are 1 year away from on-time enrolment in government pre-primary and 2 years away from enrolment in Grade 1. Save the Children provides teachers with 5 days of initial training, followed by bimonthly refresher trainings (for a total of four refresher training sessions during the school year). Teachers also receive 1 day of training in supporting parents to build children's emergent mathematics and literacy and an orientation on Save the Children's child safeguarding policy.

> *The EYPP leverages existing resources (such as trained pre-primary teachers and pre-primary classrooms) to provide a second year of quality preschool education.*

Teachers are to conduct monthly parenting sessions to build awareness among parents about providing a supportive and educational environment at home and providing materials and activities for home learning in literacy and mathematics. Each session lasts 1.5 hours.

The School Management Committee and Save the Children's Community Core Group play a key role in program implementation, providing supports such as engaging teachers and paying a portion of their salaries, recruiting families, providing material support (e.g., mats, tiffin), and maintaining program records. The exact support varies based on the needs and interests of each community's EYPP program and stakeholders.

[1] See https://moedu.gov.bd/site/page/318a22d2-b400-48a7-8222-303ab11cc205/National-Education-Policy-2010-

Evaluation Objectives and Intended Audience

This study aimed to (a) investigate the impacts of offering an additional year of pre-primary education in Bangladesh on child development outcomes (cognitive and social-emotional) and (b) examine the benefits relative to the costs of the program. The study also examined the mechanisms through which the EYPP affected the outcomes of interest (e.g., children's school readiness) and the operational and community conditions for program implementation. This study provides 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 be useful for other countries considering similar programming. This report provides endline findings for the evaluation and incorporates information from the baseline (2018) and midline (2019) reports.

Evaluation Methodology

This study is a randomized controlled 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 to establish causal impact of the program. In 2016, we randomly assigned 100 schools in the Meherpur district of Bangladesh to either a treatment group receiving the EYPP (n = 50) or a no-program control group (n = 50). The children participating in the study from these communities were expected to enrol in government pre-primary in 2019 and enter Grade 1 in 2020. Nearly all children in this study came from households that had electricity, books, and store-bought toys.

In the 50 treatment school catchment areas, children selected for the study were invited to participate in the EYPP at their local school in 2018 and were then expected to go to the government pre-primary as usual in 2019. In the 50 control school catchment areas, children selected for the study were eligible to enrol in a government pre-primary program as usual in 2019 but did not have the EYPP available to them the year before. This process allowed us to estimate the net effects on children of adding the second year of pre-primary education (EYPP) compared with having only 1 year of pre-primary education (business as usual).

The aim of this evaluation was to answer primary research questions about program effectiveness and cost as well as secondary research questions regarding the mechanisms of change, relative program effects for boys versus girls, and fidelity of program implementation. At midline, we assessed children's school readiness, noted their characteristics (such as their health), learned whether they had participated in any pre-primary education (EYPP or other), asked parents about support for children's learning at home, learned about EYPP teacher perceptions of the program, and obtained EYPP monitoring data from Save the Children. At endline, we again assessed children's school readiness, noted their characteristics, and learned about their participation in educational programming. The World Bank gathered cost information about the program (reported separately).

This EYPP impact study was carried out as planned, using rigorous methodology.

Throughout the study, we had zero attrition at the school level. At the child and family levels, we had just 2.2 percent attrition at midline and 3.0 percent at endline, and no evidence of differential attrition between study groups. All study activities were completed on time, and the field team reported no disruptions and only minor issues (such as a few families being out of the area during data collection).

Implementation of the EYPP

The EYPP was implemented as intended, and teachers were very positive about the programme overall. They felt that the programme was beneficial to the children, and that they had the resources they needed to deliver the EYPP. There were two areas where teachers suggested improvements, both in the area of working conditions. One was to make the position more stable rather than short term (including predictable wages). The other was to provide EYPP teachers with ongoing monthly professional development support.

In the communities assigned to the EYPP group, 49.9 percent attended the EYPP, 40.0 percent attended other programming, and 10.1 percent did not attend preschool in 2018. In the control communities, 58.2 percent of children went to other preschool programming, and 41.8 percent did not attend preschool.

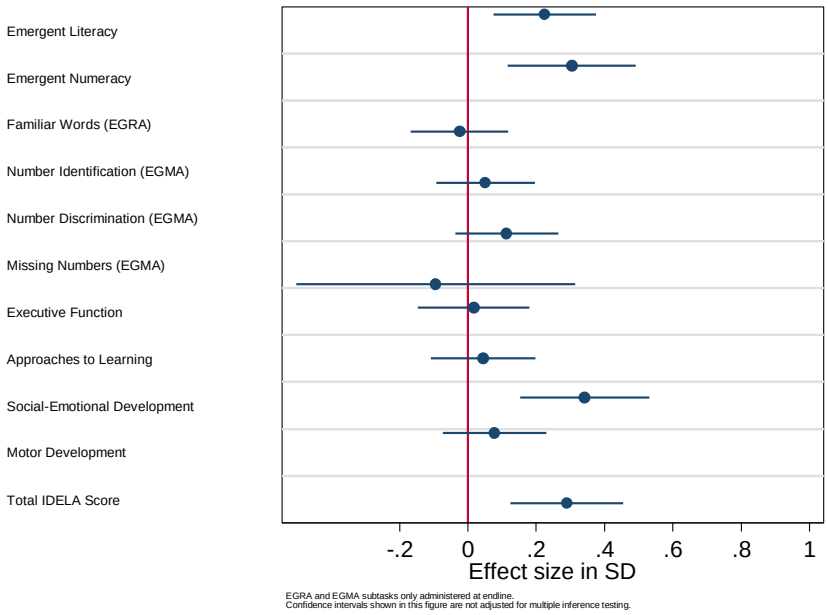
The EYPP filled a gap in communities primarily by providing preschool to children who would not have attended otherwise. Having the EYPP available increased preschool enrolment by 31.7 percentage points, to 89.9 percent coverage.

Impacts on School Readiness

The EYPP had a lasting, positive intent-to-treat (ITT) impact of 0.23 standard deviations on children's literacy, 0.30 standard deviations on numeracy, and 0.34 standard deviations on social and emotional development; these increases should be expected with scale-up of the EYPP (see Exhibit 1). These increases in students' school readiness scores for children in the treatment group are equivalent to 18 percent of the status quo literacy scores, 26 percent of the status quo numeracy scores, and 38 percent of the status quo social and emotional development scores. In other words, when compared to children's natural progress when the EYPP is not available in their communities, on average, after the mandatory preschool year (i.e., in other words, the difference in midline scores and endline scores for children in the control group), an additional year of preschool was found to increase literacy, numeracy, and social emotional development scores by 18 percent, 26 percent and 38 percent, respectively.

The EYPP had lasting, positive effects on children's development in early literacy, numeracy, and social and emotional learning, plus overall school readiness.

Exhibit 1. Endline Intent-to-Treat Effects of EYPP



The local average treatment effects (LATE) were similarly large and consistent over time, with impacts of 0.44 standard deviations, 0.57 standard deviations, and 0.68 standard deviations for children's literacy, numeracy, and social-emotional development, respectively; these estimates should be expected for only those children who would be affected by scale-up of the EYPP (i.e., those who would likely attend if offered EYPP). Gains by the intervention group in these areas at midline (when children were about to start the typical 1-year government pre-primary class) persisted even after children in both the treatment and control groups attended the typical 1-year government pre-primary class, and the EYPP group still had significantly better development in these areas. These intervention effects were significantly higher for girls than for boys at both time points (although boys also benefitted from the intervention). We found program effects on approaches to learning and motor development at midline, but these disappeared by endline (when the treatment and control groups were roughly equivalent again on these particular outcomes). We also did not find any program effects on EGRA and EGMA subtasks administered at endline. Subtasks from these two tests were included to hedge against potential ceiling effects in the IDELA literacy and numeracy domains at endline. Because the EGRA and EGMA items are designed for primary-level students, we were not surprised that the intervention did not have any significant effect on children's performance while at the pre-primary level.

We did not find any significant impact of the EYPP on the extent to which children received learning stimulation support in their homes. However, at endline, children in the EYPP group were more likely than those in the control group to have books (other than textbooks) at home (66.7 percent versus 56.4 percent, respectively).

Costs

According to an unpublished 2019 report prepared by the World Bank, the midpoint cost estimate suggested a total annual cost of US$3,146 per community to provide the EYPP in the 50 intervention communities (Fishman & Holla, 2019). Financial reports that involved expenditures per child indicate there were 1,084 beneficiaries, and thus the estimated total costs translate into an annual unit cost of $145 per child. Note that these estimates capture the *total* costs of providing the EYPP (including things like use of extant classrooms, and school and community contributions to teacher's salary), not just the expenditures by Save the Children (Fishman & Holla, 2019).[2]

If comparing costs of the EYPP to the costs of other preschool models, it is critical to ensure that the estimates for the other models include all costs (as we have in the EYPP estimates), and not just those costs borne by program providers or funders. Otherwise the comparison is inaccurate, and will likely make other programmes appear much less costly than they really are.

Recommendations

Given the high level of success with the programme as it is now, we have just three recommendations.

First, scale up the EYPP programme in Bangladesh. The intervention is an effective, scalable approach to providing children with a second year of pre-primary education. The EYPP significantly improved school readiness for both girls and boys (and especially girls) in ways that persisted to the start of Grade 1, and was very effective in getting 4-year-old children enrolled in a second year of preschool who would not have been otherwise.

Second, keep the existing programme structure and curriculum. The intervention leverages existing human and material resources, typically engaging the pre-primary teacher and classroom (used half the day to deliver the 1-year pre-primary class)—a great help in terms of scalability. EYPP teachers were very positive about the programme, and had only minor suggestions for improving the curriculum (which should be noted for curriculum improvement).

[2] If comparing these costs to estimates from other programmes, it is very important to ensure that the estimates from the other programming are similarly constructed (rather than just reflecting the portion of the total cost that is captured in programme or school budgets).

And third, professionalize and stabilize the role of EYPP teacher. During the pilot, EYPP teachers were hired and paid through a combination of Save the Children and local entities (such as school management committees), rather than though government systems as other teachers would be. When the EYPP is expanded or scaled, it would be very beneficial to designate the EYPP teacher role as similar to the role of other teachers, with stable contracts and predictable pay (ideally through the government, as occurs with the one-year government pre-primary class). In addition, EYPP teachers should receive more ongoing professional development, as they requested—ideally through the government's systems to support educators at other levels.

In sum, the EYPP provides an effective approach to improving school readiness among Bangladesh's children, and it seems scalable within Bangladesh's existing education system.

The EYPP fills a need for quality preschool programming and may (potentially) show an even larger benefit in more marginalized areas where families have fewer preschool options for their children.

1. Introduction

In recent decades, Bangladesh has been recognized for its great success in improving educational and health outcomes. Coinciding with economic growth in this period, Bangladesh has rapidly improved a range of important social indicators, including access to and quality of primary and pre-primary education. The Bangladesh's National Education Policy 2010 includes a plan for 2 years of pre-primary education, starting with 1 year of pre-primary education in all primary schools and gradually growing into a 2-year program. With its Early Years Preschool Program (EYPP), Save the Children provides the additional year of preschool to 4-year-old children, who then progress to the 1-year government pre-primary class at age 5 and first grade at age 6. This endline report provides information about the impact of the EYPP on children's learning just prior to beginning Grade 1 (endline) and incorporates midline findings (from just prior to children's expected enrolment in the typical 1-year government pre-primary class).

1.1. Evaluation Context

There is growing evidence that preschool increases young children's school readiness by improving cognitive and social-emotional development. It can have lasting benefits beyond primary school, especially for students who are socially and economically disadvantaged (Currie & Thomas, 1995; Deming, 2009; Feller & Gelman, 2014; Kline & Walters, 2015). Pilot studies from rural Bangladesh confirm the positive impacts that preschool has on school readiness and social development outcomes (Aboud, 2006; Aboud & Hossain, 2011).

In 1995, Save the Children began implementing pre-primary programs in different regions of Bangladesh. In the Meherpur district, these activities started in 2007. During this period, the government did not provide formal pre-primary education. In 2008, the government's Directorate of Primary Education (DPE) developed the operational framework for pre-primary education. To support these efforts, Save the Children developed the EYPP as a pilot program (targeting 4-year-olds) and started implementing it in a subset of interested primary schools. Save the Children completed its work on this project in collaboration with a local partner, Shishuder Jonno.

In 2014, the Bangladeshi government formally announced the national expansion of the one-year pre-primary class for five-year-olds, with the pre-primary classes attached to government-run primary schools. It is optional for parents to enrol their child in pre-primary education, and as of 2018, 41 percent of Bangladeshi children aged five were enrolled in pre-primary education.[3]

Save the Children selected Meherpur for this programme pilot because it was among the Bangladeshi regions with fewer pre-primary education centres. Save the Children's 2010 internal study on parenting education and support programs, found that 75 percent of children

[3] See https://data.worldbank.org/indicator/SE.PRE.ENRR

in Meherpur had inadequate stimulation, and 35 to 45 percent presented with lagging cognitive and language development. According to 2016 World Bank statistics, Meherpur's poverty rate was 15.8 percent (versus 31.5% nationally), and its percentage of families in extreme poverty was 5.2 percent (versus 17.6% nationally). Its adult literacy rate was 37.7 percent (versus 50.5 percent nationally). Meherpur's statistics look similar to the national averages for percentage of children underweight (35.0% in Meherpur, 33.8% nationally), and stunting rates (41.2% in Meherpur, 40.7% nationally)[4]

1.2. Purpose, Uses, and Objectives of the Evaluation

The purpose of this evaluation is to provide rigorous evidence of the benefits of an additional preschool year for Bangladeshi children. Bangladesh's DPE can use this information to inform decision making regarding scaling a second year of pre-primary education. This study also intended 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 provided information regarding the effects of the EYPP on children's comprehensive school readiness, including cognitive, motor, and social development. This study also examined the extent to which the program was implemented as intended, was compatible with existing values and resources, and benefited both boys and girls. The World Bank conducted 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 conducted a randomized controlled 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 a treatment group receiving the EYPP (n = 50) or a no-program control group (n = 50). In October 2017, we conducted a census around all 100 schools to identify children who lived within a 15-minute walk of the school and were in the target age range—that is, children expected to enrol in typical government pre-primary in 2019 and enter Grade 1 in 2020. In the 50 treatment school catchment areas, children selected for the study were invited to participate in the EYPP at their local school during the 2018 school year and then would go on to government pre-primary as usual in 2019. In the 50 control school catchment areas, children selected for the study would be eligible to enrol in the government pre-primary as usual in 2019 but did not have the EYPP available to them the year before.

For this longitudinal study, we collected baseline, midline, and endline data. See Exhibit 2 for a summary of the project timeline and sample size. The midline and endline samples included schools, children, and families enrolled in the study at baseline; we did not add any new

[4] Data acquired from https://www.worldbank.org/en/data/interactive/2016/11/10/bangladesh-poverty-maps

participants after baseline. Of the 1,856 enrolled children and families, 1,801 (97%) participated at all three timepoints.

Exhibit 2. Project Timeline and Sample

Activity	Date	School-level sample	Child-level sample
Randomization	12/2016	100	Not applicable
School census	10/2017	100	Not applicable
Baseline data collection	12/2017–1/2018	100	1,856
Midline data collection	12/2018–1/2019	100	1,815
Endline data collection	12/2019	Not applicable	1,801

1.4. The Early Years Preschool Program

The EYPP provides preschool education to children 4 years of age, offering younger children the possibility of receiving 2 years of preschool education instead of only 1 year (at age 5). The EYPP aims to ensure holistic development for children and create early learning opportunities for younger children. By offering an additional year of preschool education, the EYPP is able to provide additional pre-primary learning experiences for children that are expected to translate into better outcomes, both in terms of school readiness and in terms of subsequent primary education outcomes.

Development of the EYPP

In 2013, Save the Children, along with representatives from the Ministry of Women and Children Affairs, DPE, under the Ministry of Primary and Mass Education, developed the EYPP to extend preschool education down to children age four. The goal of the EYPP model is to ensure holistic development for children and create early learning opportunities for younger children. The program is grounded in Bangladesh's existing Early Learning and Development Standards, [5] and was reviewed by government officials, preschool implementers, and international advisors. The EYPP curriculum was designed to seamlessly feed into the current government-approved, one-year pre-primary curriculum. Teacher guides, teacher training modules, and new materials were also developed within this objective in mind. Children participate in the EYPP from January to December (one school year), and then are expected to enrol in the government pre-primary class the next year.

[5] For example, see http://itacec.org/itadc/document/learning_resources/project_cd/ELDS%20South%20Asia/Bangladesh.pdf

Operation of the EYPP

The EYYP uses the existing pre-primary infrastructure and resources (the same classrooms), but different curriculum and materials, and functions in the form of "shifts," thus leveraging the infrastructure and resources that the government is already investing in pre-primary education. Government pre-primary classes for five-year-olds usually operate two-and-a-half hours per day, five days per week, and the EYPP is offered two hours per day. The government pre-primary centre is commonly located inside or adjacent to existing primary schools. However, in disadvantaged areas where existing primary schools may not be available close to children's homes, the location of the pre-primary centre may be in a suitable place agreed to by the community.

The EYPP follows a play-based curriculum that focuses on building children's learning holistically across developmental domains, and it has the following components: a competency-based curriculum, a teacher's guide that supports teachers through each part of the curriculum, a teacher training manual, and a list of classroom materials (e.g., developmentally appropriate books, manipulatives, and playing materials). The child-to-teacher ratio is about 15 to 20 children for each teacher, a ratio that is smaller than the average child-to-teacher ratio of 30 children for each educator in other pre-primary programs in the country. Existing pre-primary teachers who are selected from their respective communities will serve as the facilitators of the EYPP; the minimum academic qualification is a secondary education. Because the program is considered to be part of pre-primary education, the EYPP is also being managed by the current head teacher of the respective primary school. In the case that the teacher from the government pre-primary centre does not want to teach the EYPP program, a member from the community is trained run the EYPP. Teachers are paid approximately 1200 Taka ($14 USD) per month for teaching the EYPP curriculum. Note that although most EYPP teachers were government employees (and were paid for teaching the pre-primary class), their salary for teaching the EYPP class was paid by a combination of Save the Children and local sources during the pilot.

EYPP Teacher Preparation

EYPP teachers receive approximately 10 days of initial training (delivered by Shishuder Jonno). The training focuses on the classroom curriculum, basic early childhood development principles, working with young children, and classroom management. Shishuder Jonno also provides bi-monthly refresher trainings to complement the basic training and to reinforce key concepts, as well as material addressed in the curriculum implementation guide. In addition, teachers receive training on conducting parenting sessions, with the goal of increasing awareness among parents about the importance of supporting and creating a home learning environment and providing age-appropriate care for their children. These parenting sessions also aim to promote literacy and numeracy skills of children at home. Teachers are expected to

organize 6 group sessions with parents using an activity-based approach. During these sessions parents are expected to receive sets of "parent cards" including three with literacy activities (including topics such as listening and talking, the alphabet, promoting reading habits), and three with mathematics activities (covering topics such as counting numbers, shapes, and sizes), and an orientation on how to use the cards at home with their children.

Parent and Community Involvement

Parents of EYPP learners are offered monthly sessions facilitated by teachers. These parenting sessions aim to build an understanding of child development and promote the development of 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.

Shishuder Jonno staff involve SMCs and community groups in the start-up activities to establish the EYPP. The SMCs recruit the teachers. Before starting the EYPP, teachers, SMCs, and community groups arrange inception meetings with parents to describe the objectives and importance of the EYPP and explained the parent's role. SMCs provided partial salaries for the teachers and helped support children's enrolment in pre-primary classes after completion of the EYPP.[6]

Monitoring

Shishuder Jonno early childhood technical staff monitor and supervise the EYPP on a regular basis. The technical staff identify gaps and subsequently provide on-the-job support and capacity-building support 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.[7] Based on data provided by the MEAL team, the program team develops and implements strategies to address any implementation gaps and overcome related challenges. No system is currently in place for monitoring children's learning and development.

In Sections 6 and 7 of this report, we describe program implementation during the year the treatment group received the EYPP (2018), including the extent to which programming was implemented as intended, participation rates, and feedback from stakeholders.

1.5. Evaluation Questions

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

[6] Save the Children provided the remainder of the teacher's salary. However, with Save the Children ending its support for the Meherpur district, Save the Children will not provide support for teacher salaries in the future.

[7] This information is logged on paper forms that are used by programme supervisors. There are no additional monitoring data available.

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 appear to be most important in achieving the program's impacts?
5. To what extent is the program implemented with fidelity?
6. What do teachers think about the training activities and materials? How can the training be improved?
7. What challenges did teachers encounter when implementing the EYPP curriculum?

We answer these questions in this endline report, including findings from the midline report where relevant.

2. Study Design

In this section, we present our approach to answering the evaluation questions, including our two main estimation models.

2.1 Identification Strategy

This study is a longitudinal RCT evaluation with repeated measures at the child level. In large-scale social experiments, it is typical to estimate program effects by using the experimental data within a longitudinal design, including a difference-in-differences (DD) design, which compares the average change across time for the treated group to the average change across time for the control group. The DD estimates represent intent-to-treat (ITT) estimates—that is, the average program impact for children who reside in a treatment village, regardless of whether any of them participated in any program activities. To obtain greater precision over typical DD estimates, we combined DD with an analysis of covariance (ANCOVA) design where we controlled for the baseline value of the outcome measure using the following specification:

$$\Delta Y_{is} = \alpha_1 + \beta_1 Treat_s + \beta_2 Midline_t + \beta_3 Endline_t + \beta_4 (Treat_s * Midline_t) + \beta_5 (Treat_s * Endline_t) + \delta Y_{is(t-1)} + \gamma_1 \mathbf{X_{it}} + \Delta\varepsilon_{is} \quad [1]$$

where ΔY_{is} is the first difference of outcome Y for child i in village s between midline and baseline (i.e., $\Delta Y_{is} = Y_{is,1} - Y_{is,0}$); $Treat_s$ is a dummy variable equal to 1 if child i belongs to a treatment village; *Midline* and *Endline* are dummy variables equal to 1 for the midline and endline follow-up rounds, respectively; $Y_{is(t-1)}$ is the baseline value of the outcome variable; $\mathbf{X_{it}}$ is a vector of time-variant characteristics; and $\Delta\varepsilon_{is}$ is a first difference of the error term. The estimates of β_4 and β_5 represent the ITT effects of the program at midline and endline, respectively. With random assignment for the villages, the ITT estimate represents the causal effect of the program for those children who live in the treated community.

The above specification does not account for whether children actually attended EYPP instead of staying home or enrolling in other preschool programming. To estimate the impact of the program for those who attended EYPP preschool programming, we estimated the following specification:

$$\Delta Y_{is} = \alpha_1 + \beta_1 EYPP_s + \beta_2 Midline_t + \beta_3 Endline_t + \beta_4 (EYPP_s * Midline_t) + \beta_5 (EYPP_s * Endline_t) + \delta Y_{is(t-1)} + \gamma_1 \mathbf{X_{it}} + \Delta\varepsilon_{is} \quad [2]$$

where $EYPP$ is a dummy variable equal to 1 if child i in village s received any program activities and 0 otherwise. However, estimating equation 2 for those who participated in any program activities may result in biased program impacts, given that families who decide to participate in the program may be very different in observed and unobserved ways compared with those who do not participate, which may ultimately affect the program impacts. To address this issue, we conducted an instrumental variable approach in which we used the random assignment of communities as an instrument for program participation. To do this, we first estimated the likelihood that families in the treatment group actually sent their child to the EYPP:

$$\widehat{EYPP_s} = \alpha_1 + \delta_1 Treat_s + \gamma_1 \boldsymbol{X_{it}} + \varepsilon_{it} \quad [3]$$

Then we inserted these predictions of EYPP enrolment into equation 2 as follows:

$$\Delta Y_{is} = \alpha_1 + \beta_1 \widehat{EYPP_s} + \beta_2 Midline_t + \beta_3 Endline_t + \beta_4 \left(\widehat{EYPP_s} * Midline_t\right) + \beta_5 \left(\widehat{EYPP_s} * Endline_t\right) + \delta Y_{is(t-1)} + \gamma_1 \mathbf{X_{it}} + \Delta\varepsilon_{is} \quad [4]$$

The estimated impact from this IV analysis is known as the local average treatment effect (LATE) because it estimates the effect of the EYPP program only for those children who actually attended EYPP in the treatment group. The ITT estimate provides the overall increase in child development one should expect with scale-up of the EYPP. However, since some children would participate in the extra year of preschool even in the absence of public provision, the LATE estimate provides the increase in child development expected for those children who would be

affected by a scale-up. We used cluster-robust standard errors to account for the clustering of children within schools.

3. Data Collection

All three rounds of data collection went largely as planned. In this section, we present (a) the objectives for each round of data collection, (b) a description of the sample and information about attrition, (c) a power analysis, (d) a description of the instruments, (e) a description of the training process for enumerators, and (f) a description of the data collection. We will address all three rounds of data collection in these sections.

3.1. Objectives of the Data Collection

Each round of data collection had somewhat distinct objectives.

Baseline

The baseline data collection had three main purposes. First, it is important to document and describe the status of the evaluation sample before introducing an intervention. This information includes background information on the children, plus their level of school readiness before any programming begins. We also documented conditions for the EYPP classrooms to capture the context within which the program would be implemented.

Second, baseline data enabled us to make outcome comparisons over time to measure whether outcomes for specific children changed over time and how much (relative to changes anticipated by the program's theory of change).

Third, baseline data enabled us to conduct baseline equivalence tests to ensure that randomization created equivalent treatment and control groups. The baseline equivalence tests also identified which outcomes showed pre-existing (random) differences between groups, so that we could control for those differences when estimating impacts.

Midline

The midline data collection had two main purposes. First, the midline data collection was important to determine whether the EYPP produced short-term impacts following the first year of preschool education in case those would subside by endline. In other words, midline data allowed us to examine whether children attending EYPP schools outpaced their counterparts not attending the first year of preschool, at the time all children should be transitioning to the 1-year government pre-primary program. Second, at midline, we gathered comprehensive information about program implementation from parents and teachers.

Endline

The purpose of endline data collection was to determine whether early gains in school readiness among the intervention group persisted up to the point when children in both treatment groups should be transitioning to Grade 1. With this information we are able to finalize our answers to the research questions that guided this study.

3.2. Sampling and Attrition

One hundred schools in the Meherpur district of Bangladesh participated in this study. These schools were selected and randomly assigned in 2015 according to the following process, with the final count of schools by union in Exhibit 3:

- From the pool of communities without the pilot EYPP across the three *upazilas* in Meherpur (*N* = 238), we removed all community-based schools (*n* = 90), leaving 148 schools.[8]
- Where communities had multiple schools, we restricted the sample to one school to avoid potential crossover effects, leaving 105 schools.
- Because we needed 100 schools for the study, we randomly dropped five of the 105 schools.
- We stratified the 100 schools by the 20 unions they were in[9] to reduce potential differences driven by geography or context, and then randomly assigned 50 schools to the EYPP group and 50 schools to a business-as-usual control group.

Exhibit 3. Study Sample and Attrition

Unit	Target	Recruited	Midline		Endline	
	Sample	Sample	Sample	Attrition	Sample	Attrition
Children/families	1,903	1,856 (97.5%)	1,815	2.2%	1,801	3.0%
EYPP schools	50	50 (100%)	50	0.0%	n/a	n/a

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

[8] We dropped all community-based schools and education centers to ensure a homogenous group of centers and implementation of the EYPP program.

[9] During our randomization process, we selected half of the schools in a union for the treatment group and half for the control group. When a union had an odd number of schools, we randomly selected one school to remove and then sampled from the remaining schools. Appendix A provides the breakdown of sampled schools by upazila and union.

During an October 2017 visit to Meherpur, we learned that the EYPP schools typically accepted 18–20 children but 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 centre. 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 36,806 households across the 100 study communities. For each household with children ages 3–6 years old, enumerators recorded each child's name and date of birth, the 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 Global Positioning System (GPS) coordinates and asked how many minutes it would take the child to walk from the home to the primary school.

The target sample included all children in the census areas born from January 1, 2013, to December 31, 2013 (because on-time enrolment in the government pre-primary school for these children would be in January 2019). In a substantial majority of cases (exact figure unknown), we verified children's dates of birth using the Extended Program of Immunization card or a birth certificate. If these documents were unavailable (even after encouraging parents to search for them), enumerators recorded what the parent reported as the child's date of birth. We identified 1,986 children born in 2013. We did not exclude any age-eligible children based on any other criteria (e.g., children with disabilities were in our sample pool).

The American Institutes for Research (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 centres will typically enrol 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 six control) with more than 25 children in the target age range, we drew a random subsample of 25 for inclusion in the study, resulting in 1,903 children. Exhibit 3 shows the sample recruited at baseline for this study and the numbers retained at midline and endline. Recruitment success 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 originally recruited for this study, 908 were girls and 948 were boys. We also realized very low attrition rates of only 2.2 percent at midline and 3.0 percent at endline.

Although overall attrition rates were low, we still tested for differential attrition between the treatment and control groups (see Section 4). Our findings indicate that the study did not suffer from bias resulting from differential attrition among the treatment arms.

3.3. Power Analysis

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

Exhibit 4 shows the assumptions and the minimum detectable effect (MDE) for the International Development and Early Learning Assessment (IDELA) scores, an important outcome measure for this study. Calculations of the intraclass correlation, proportions of variances (R12 and R22), and the average number of children per school were calculated from the baseline data. The child-level covariates included the characteristics of parents and households and the age and sex of the child. The community-level covariates included infrastructural characteristics and distance to assorted services. We calculated the MDE using the software tool PowerUp! (Dong & Maynard, 2013). Assuming perfect take-up (i.e., all of the sampled children in the baseline in the treatment communities enrol in the preschool), the smallest standardized mean difference in IDELA score we were able to detect is 0.19. Our original estimates assumed an attrition rate of 20 percent (i.e., 80 percent remaining in the sample at follow-up), which implied we would be able to detect a difference of 0.24 (= 0.19/0.80) standard deviations in the IDELA scores between the treatment and control groups. In reality, 97 percent of our initial sample was retained at endline, implying that we were able to detect a difference of 0.20 (0.19/0.97) standard deviations. Recent studies assessing children's school readiness as a result of increased access to preschool programming have found effects of 0.30 standard deviation, on average, suggesting that our study was adequately powered to detect reasonable impacts on these outcomes (Bonilla, Spier, Carson, Ring, & Sirma, 2018; Dowd, Borisova, Amente, & Yenew, 2016; Yousafzai et al., 2018).

Exhibit 4. Minimum Detectable Effect Size Parameters

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 (intraclass correlation)	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)	18	Mean number of children per school
J (sample size [number of clusters])	100	Number of schools
MDE	**0.20**	**Minimum detectable effect**

3.4. Instruments

For this study, we developed instruments that collected background information on the communities and schools, gathered feedback from teachers implementing the EYPP, and included household surveys and direct assessments of children's learning. In Exhibit 5, we summarize the timing for using each instrument. Following the exhibit, we provide information on each instrument. Please see Appendix B for copies of all instruments except for the IDELA school readiness assessment.[10]

[10] While the IDELA assessment is open source, researchers must sign a memorandum of understanding with Save the Children to use the tool. Therefore, we cannot display a copy of the IDELA because of copyright restrictions. More information about the IDELA tool and how to request its use can be found here: https://idela-network.org/

Exhibit 5. Instruments and Timing

Instruments	Timing		
	Baseline	Midline	Endline
Community questionnaire	X		
School observation	X		
EYPP teacher questionnaire		X	
Family questionnaire	X	X	X
School readiness assessment	X	X	X

Community Questionnaire

The community questionnaire was used only at baseline. In each study community, the informant for the Community Characteristics Questionnaire was a school head, head teacher, or other leader at the primary school 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 were intended to benefit children ages 3–6 years old. Exhibit 6 summarizes the domains and topics covered in this questionnaire.

Exhibit 6. Domains and Topics Covered in the Community 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 health care providers Union council Availability of schools
Programming for ages 3–6	School feeding Water, sanitation, and hygiene (WASH) Provision of school supplies to needy families Availability of other programming not listed

School Observation

We administered the School Observation at baseline only, with schools in the 50 intervention communities. The purpose of this instrument was to provide a baseline description of the conditions in which the EYPP was implemented, including safety, the presence of utilities in the

pre-primary classroom, WASH status, and the material teaching and learning resources available to the EYPP class. Exhibit 7 summarizes the domains and topics covered in this observation.

Exhibit 7. 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

EYPP Teacher Questionnaire

We introduced a teacher questionnaire at midline (only) for teachers of the EYPP classes (Exhibit 8). We asked the EYPP teachers about their perceptions of the program, its alignment with children's developmental needs, the extent to which they received adequate training and support to implement the program well, and any recommendations they wished to share to inform program improvements.

Exhibit 8. Domains and Topics Covered in the EYPP Teacher Questionnaire

Domain	Topics
Perceptions of the EYPP	Need, reception by children
Alignment with children's developmental needs	Extent to which the curriculum builds children's skills Extent to which curriculum is too easy or too difficult
Preparation to teach the EYPP	Adequacy of training and support Availability of adequate resources Ability to manage class
Recommendations	Open questions about strengths of the EYPP and where improvements are needed

Family Questionnaire

We administered the family questionnaire at baseline, midline, and endline. Its purpose was to gather information on the characteristics of the study children and their home environments and, at midline and endline, to determine whether and how the intervention affected the home

learning environment (see Exhibit 9). Nearly all items on this questionnaire were already used widely in Bangladesh as part of national household surveys. To administer this tool, enumerators read questions and response options aloud to respondents (parents or guardians of the study children). For some questions about family background, we asked the question only at baseline because the answers were unlikely to change across time and were unrelated to the intervention.

Exhibit 9. Domains and Topics Covered in the Family Questionnaire

Domains	Topics	Timing		
		Baseline	Midline	Endline
General family information	Household size	X		
	Mother's and father's ages	X		
	Mother's and father's educational backgrounds	X		
	Mother's and father's literacy	X		
	Presence of other school-age children in the home	X	X	
	School enrolment status of other school-aged children in the home	X	X	
Home environment and parenting practices	Presence of reading materials in the home	X	X	
	Presence of toys and learning materials in the home	X	X	X
	Family learning support activities with study child	X	X	X
Family socioeconomic background	Size of home	X		
	Presence of utilities in home	X		
	Food security	X		
	Household expenditures	X		
	Study child's current health	X	X	
	Access to health supports for study child	X	X	
Study child's education	Enrolment status in early childhood education programming in 2018		X	X
	Dosage of early childhood education in 2018 (if attended)		X	
	Family satisfaction with 2018 early childhood education provider (if attended)		X	

	Rationale for selection of early childhood education provider used in 2018 (if attended)			X
	Reason(s) child did not attend any early childhood education programming in 2018 (if did not attend)		X	
	Child's educational enrolment status in 2019			X
	Family satisfaction with 2019 education provider (if attended)			X
	Expenditures on study child's education in 2019			X

School Readiness Assessment

At each timepoint, we measured children's school readiness with the IDELA, which has been used widely in Bangladesh. A trained enumerator administered the assessment to children one on one. See Exhibit 10 for the domains and topics covered in the assessment. We are unable to include a full copy of the IDELA in this report because of copyright restrictions. At endline, we also added subtasks from the Early Grade Reading Assessment (EGRA) and the Early Grade Mathematics Assessment (EGMA) as used in Bangladesh. Because the EGRA and EGMA were designed for children in Grade 1 and higher, we did not expect the study children to perform well, but wanted to ensure that we were prepared should we have ceiling issues with children's performance on the IDELA.

Exhibit 10. Domains and Topics Covered in the School Readiness Assessment

Domain	Topics
Social and emotional development (IDELA)	Self-awareness Friends Emotional awareness/regulation Empathy/perspective taking Solving conflict
Emergent numeracy (IDELA)	Comparison by size and length Sorting and classification Shape identification Numeral identification One-to-one correspondence Addition and subtraction Puzzle completion

Emergent literacy (IDELA)	Expressive vocabulary Print awareness Letter identification First letter sounds Emergent writing Oral comprehension
Executive function (IDELA)	Short-term memory Inhibitory control
Fine motor skills (IDELA)	Copying a shape Drawing a person Folding paper
Gross motor skills (IDELA)	Hopping
Approaches to learning (IDELA)	Attention Confidence Concentration Persistence Mastery motivation Interest
EGRA (endline only)	Reading familiar words
EGMA (endline only)	Numeral identification Number discrimination Missing number (mathematical patterns)

3.5. Enumerator Training

The team used similar approaches for baseline, midline, and endline enumerator training. There was continuity in the trainers and a large degree of continuity in the enumerators. All enumerators were employed by Data International and were Bangladeshi. For all three rounds of training, (a) the AIR project lead attended to provide support and guidance, (b) all data collectors and field supervisors signed the AIR Participant Protection Assurance form, and (c) all data collectors and field supervisors also attended a briefing on Save the Children's Child Safeguard Policy, organized by Save the Children.

Baseline

A total of 32 data collectors and four field supervisors were trained. Two experts from Save the Children Bangladesh provided intensive training on IDELA to the data collectors and field supervisors on December 3–6, 2017. The training included pretesting of the instrument. Senior staff members of Data International provided training for the remainder of the tools.

Following the 4-day training in Dhaka, a 3-day second round/refresher training (December 17–19, 2017) was held 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 (tablets) with preinstalled IDELA tools and the household survey instrument.

Midline

A total of 32 data collectors and four field supervisors were trained. For the midline data collection, the aim was to recruit and train all field supervisors and data collectors who worked on the baseline survey in 2017. All supervisors and 85 percent of the data collectors from the baseline team were part of the midline data collection team.

Experts from Save the Children Bangladesh and senior members of Data International provided intensive training on the IDELA and the household instrument on November 25–30, 2018. This training included practice with children and families in Meherpur who were not in the study sample. In addition, all supervisors were trained separately on how to conduct the teacher interview. The data collectors and field supervisors underwent orientation and training in the use of electronic data collection devices (tablets) with preinstalled IDELA tools and the household survey instrument.

Endline

Almost all the field staff, including field supervisors and field enumerators, who were involved in the baseline and the midline surveys worked in the endline assessment. A total of 40 field enumerators—20 for IDELA testing and 20 for household interviews—completed the data collection. The field enumerators worked under the direct supervision of 10 field supervisors.

Training occurred in two batches. The first round of training was at Data International's Dhaka office, November 3–5, 2019. Field supervisors and a selected number of field enumerators attended these sessions.

Data International's senior staff—the team leader, the data management specialist (DMS), and the field operations specialist—were the other trainers. The DMS focused on the usage of tablets during the interviews. The training highlighted common mistakes made by the enumerators in previous rounds of data collection while using tablets. The DMS also ensured that the field data collectors were comfortable in data entry, and that no glitches appeared in the software developed by the DMS and the data management assistant.

The second batch of training occurred in the town of Meherpur, November 7–9, 2019. The remaining field enumerators received the training from Data International's senior staff. A staff member from Save the Children provided training on the school readiness assessment.

3.6. Data Collection Process

For each round of data collection, implementation of the data collection process in the field closely aligned with the plans.

Baseline

The baseline data collection was conducted between December 20, 2017, and January 12, 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 the name of the household head and that of the para (subvillage), along with the GPS coordinates and mobile telephone number. Almost all of 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 sampled for the study. After identifying a child (household), the data collector explained the purpose of their visit, read the consent form to the respondent, and obtained verbal or written permission. After obtaining parental consent, respondents received contact information for representatives from Data International, AIR, and Save the Children. We shared this information in the event respondents had further queries on the study in the future or wished to later withdraw from the study. This consent form was valid for the duration of the study (although families were free to withdraw at any point).

Completion of the Instruments. Sixteen data collectors were entrusted with the task of using tablets for IDELA test administration, and 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, the data collection team completed 1,856 of 1,903 targeted household interviews and IDELA assessments (98 percent of the total sample). See Appendix A for sample participation numbers by *upazila*. A total of 47 household/IDELA interviews were not conducted because of migration from the area (n = 13), age ineligibility (n = 12),[11] case duplication (n = 2), or interviewees who were otherwise unavailable during the data collection window (n = 20). Community-level data were gathered for all 100 communities, and school-level data were gathered for all 50 EYPP schools as planned.

Challenges. Minimal challenges occurred in the successful completion of baseline data. No *hartals* (strikes) occurred in Meherpur during the data collection, and the political situation was stable.

[11] Children's dates of birth were gathered during the census in November 2017 and rechecked at baseline.

Midline

The midline data collection occurred in December 2018, and included following up with children and their families sampled at baseline.

Completion of the Instruments. With the goal of interviewing all children and households interviewed in the baseline survey, the midline data collection involved several steps. The first step involved tracking the children enrolled in the study. After identifying the children, the IDELA test was administered, followed by home visits to conduct the household interview. Step 2 required tracking those children not currently enrolled in the EYPP or admitted to a control school. To track each child, the GPS coordinates collected at baseline were used to locate the homestead. After tracking the household, identification of the child was confirmed by verifying the name of his or her parents. Step 3 involved tracking children not found at their residence because they were visiting relatives during school holidays or their family had permanently migrated to a different location. A total of 52 such children belonged to this category. Subsequent visits to their residence or visiting a relative's place located within a few kilometres enabled interviewing 11 of these children and their parents. Of the remaining 41 children, 29 had migrated to a new upazila (too far away for the team to visit), and 12 were away throughout the data collection window (e.g., visiting relatives).

Challenges. Minimal challenges occurred in the successful completion of midline data collection. Hartals occurred in Meherpur during the data collection, but the political situation was stable.

Endline

The Endline survey occurred in November 2019 and included an attempt to reach all families and children who enrolled in the study at baseline.

Completion of the Instruments. With the goal of interviewing all children and households interviewed for the baseline and midline surveys, the endline data collection involved several steps. To track the children, the GPS coordinates collected at baseline helped locate each homestead. After tracking the household, identification of the child was confirmed by verifying the name of his or her parents. At endline, 29 additional children were lost from the sample because their family had migrated to a new *upazila* (too far away for the team to visit), and three were away from home throughout the data collection window.

Challenges. Minimal challenges occurred in the successful completion of endline data collection. Hartals did not occur in Meherpur during the data collection, and the political situation was stable.

4. Characteristics of Communities, Children, and Families

In this section, we describe access to public infrastructure in sampled communities. We also describe children's physical well-being, household access to physical health services, and parents' monitoring of their children's overall health.

4.1. Community Characteristics

At baseline, we collected data on 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 enrol their children in preschool. We found that 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. In terms of access to health care facilities, 22 percent of villages were located within a 30-minute walk of the nearest district hospital, and 51 percent were within a 30-minute walk of an upazila health complex.

4.2. Children's Health

We assessed health outcomes for all children in our study, and present comparisons by treatment arm and gender. Children's well-being and their access to health supports are important contextual factors in our logic model. Children who are unwell are likely to stay home from preschool. When they do come to school, undernutrition and illness can hinder their ability to take part in learning. We examine the moderating effects of these indicators in Section 7.

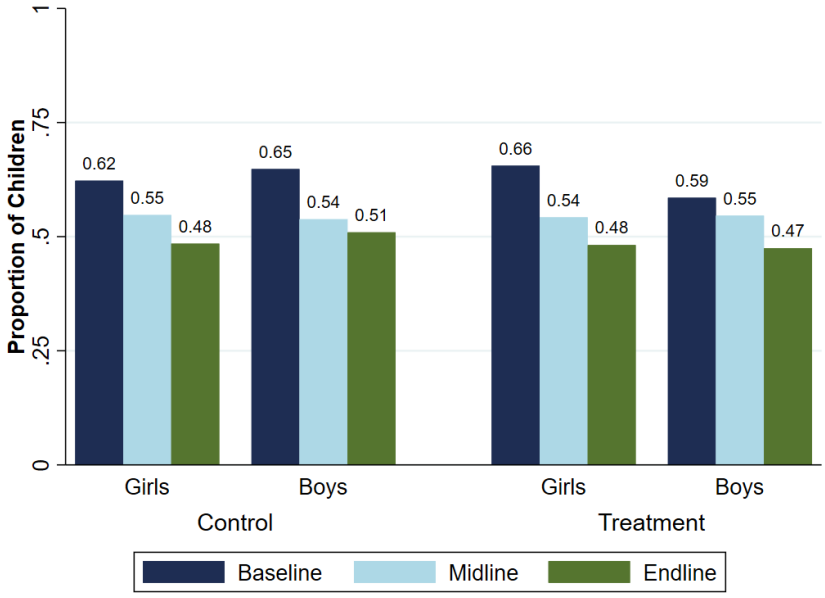
Parents were asked to rate their child's overall heath and identify any recent issues affecting their child's well-being. Parents also were asked whether they had recently given their child a deworming treatment and about the frequency with which they monitored their child's growth. At endline, fewer parents reported that their child was in good or very good health and fewer parents in the treatment group reported that their child had a respiratory illness compared with parents in the control group. However, this difference was statistically insignificant and of lower magnitude than the difference between the two groups at midline and baseline.

Children's Overall Health

At endline, about 38 percent of the parents reported that their child was in good health, and about 11 percent of the parents reported that their child was in very good health overall. More parents described their child's overall health as moderate at endline than at baseline or midline. Among boys, 46 percent were described by their parents as having moderate health at endline, compared with 41 percent at midline and 34 percent at baseline. Among girls, 47 percent were described by their parents as having moderate health at endline, compared with 40 percent at midline and 33 percent at baseline. We did not find any significant differences

between children in the treatment group versus those in the control group at endline, nor did we find differences between boys' and girls' overall physical health status. Similarly, we found that the program did not affect children's reported health status (see Exhibit 11).

Exhibit 11. Children in Good or Very Good Health (as Reported by Parents)



We created an indicator for reported good health, defined as parents' reporting their child's health to be very good or good. We again found no evidence of impacts on this outcome and, similarly, no statistically significant differences between treatment and control at baseline, midline, or endline. However, we did find a statistically significant drop in this indicator between baseline and endline among girls and boys in both the treatment and control groups.

The proportion of children suffering from respiratory illness significantly decreased between midline and endline, whereas the incidence of diarrhoea changed only slightly. As shown in Exhibit 12, the proportion of children suffering from respiratory illness dropped from 54 percent at midline to 36 percent at endline for girls in the treatment group and from 50 percent to 38 percent for boys in the treatment group. The drop in the incidence of respiratory illness between midline and endline was statistically significant for both boys and girls in both groups.

The number of children reportedly suffering from diarrhoea remained low, at roughly 5 percent in both the treatment and control cohorts at midline and endline. We found no significant differences in the proportion of children reporting diarrhoea across time between our treatment and control groups. We likewise found no significant differences across time for boys or girls between the treatment arms. See Exhibit 13 for the statistical details.

Exhibit 12. Children's Recent Illnesses

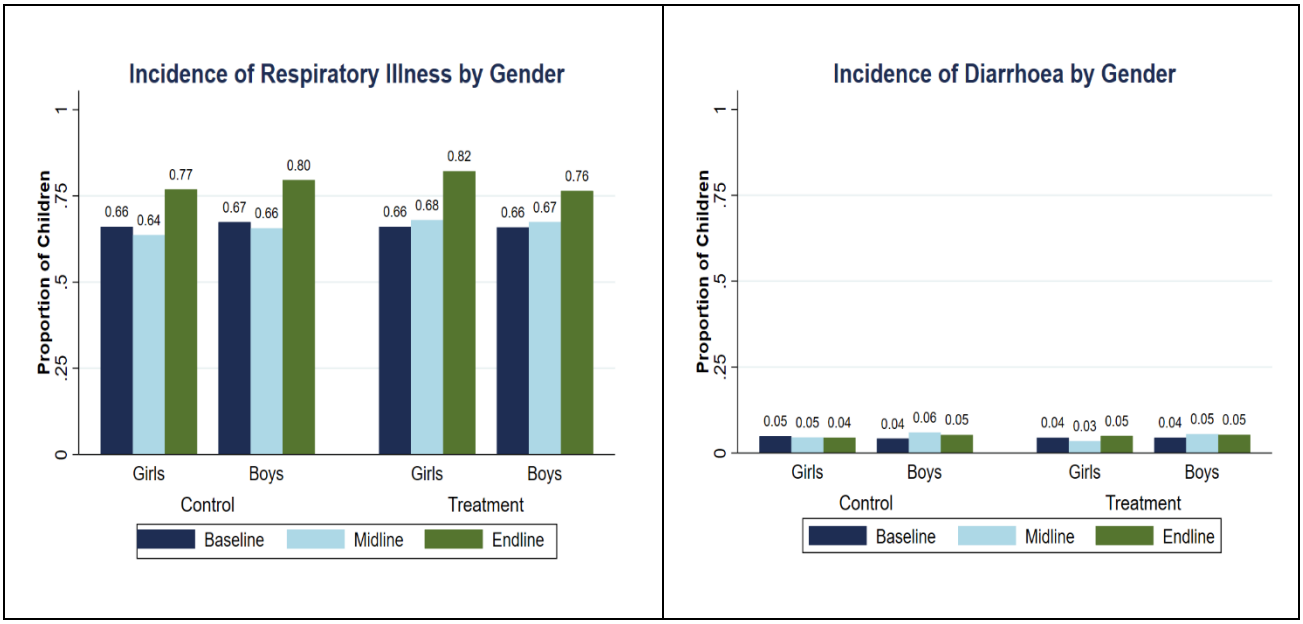


Exhibit 13. Children's Health Outcomes by Gender

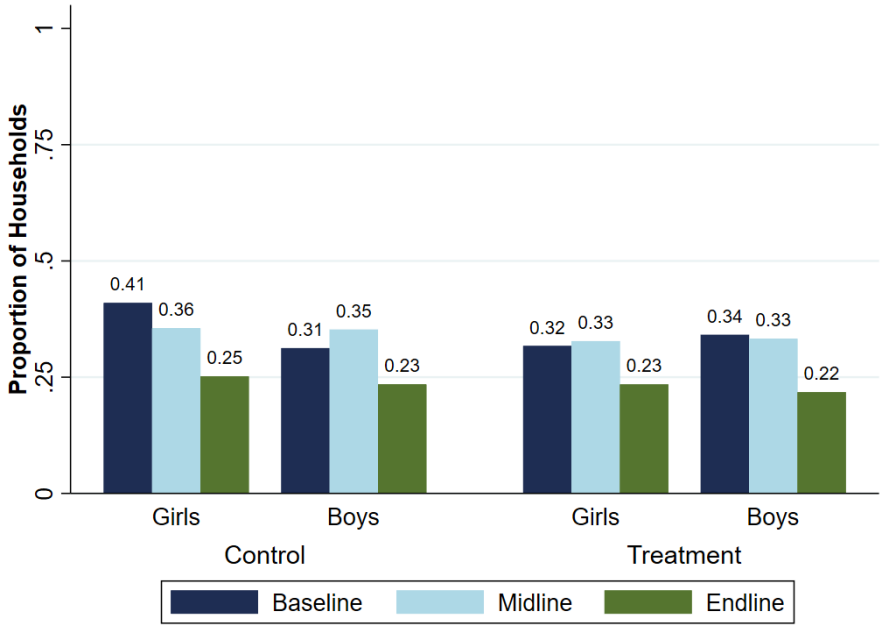
	Baseline			Midline			Endline		
	Girls	**Boys**	***p*-value**	**Girls**	**Boys**	***p*-value**	**Girls**	**Boys**	***p*-value**
Very good health	12.67%	9.61%	**0.04**	10.76%	11.39%	0.67	10.90%	10.63%	0.86
Good health	51.32%	51.85%	0.82	43.71%	42.86%	0.71	37.42%	38.45%	0.65
Moderate health	32.82%	34.21%	0.53	40.43%	41.03%	0.79	47.19%	45.86%	0.57
Bad health	2.86%	4.01%	0.18	4.76%	4.40%	0.72	4.27%	4.73%	0.64
Very bad health	0.33%	0.32%	0.96	0.34%	0.32%	0.95	0.22%	0.32%	0.69
Cough or difficulty breathing in last 2 weeks	56.83%	55.49%	0.56	55.15%	51.66%	0.14	38.76%	40.24%	0.52
Diarrhoea in last 2 weeks	4.63%	4.32%	0.75	3.97%	5.70%	0.09	4.72%	5.26%	0.60

Note. Data in boldface denotes significance at α=0.05.

Household Access to Supports for Child's Health

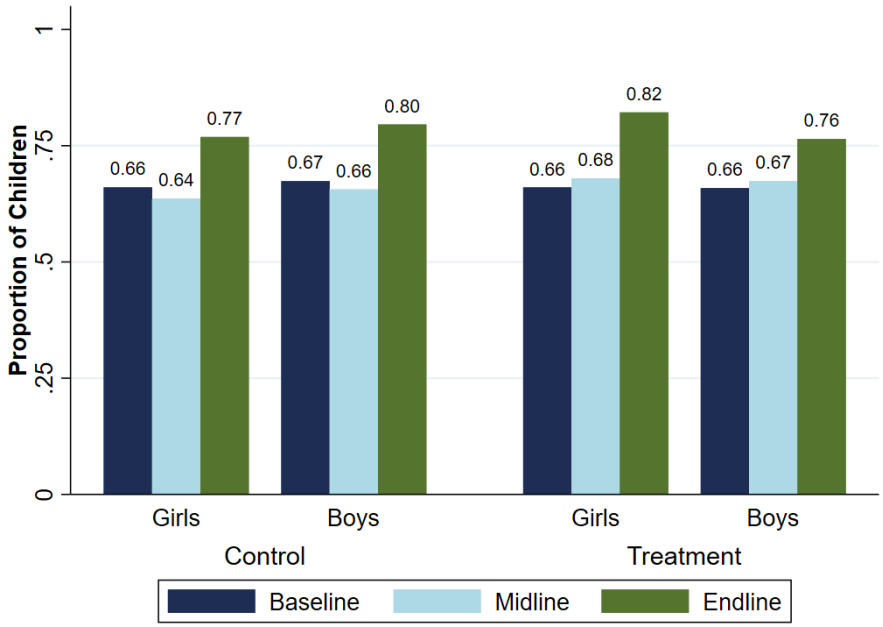
We examined children's access to support for their health by specifically looking at growth monitoring (Exhibit 13) and deworming treatments (Exhibit 14). For growth monitoring, parents were asked to report the last time their child received growth monitoring, with responses ranging from less than a month ago to more than a year or never monitored/weighed. Routine growth monitoring is the preferred practice of public health professionals to catch potential issues early on. Therefore, we constructed an indicator to identify whether the child received growth monitoring within the last year. We found no program impacts on growth monitoring. Differences in growth monitoring between boys and girls remained minor and not statistically significant at endline. However, we did find a consistently significant decrease in the rates of growth monitoring at endline for boys and girls in both the treatment and control groups.

Exhibit 14. Proportion of Children Receiving Growth Monitoring > 1 Year Ago by Gender



As shown in Exhibit 15, deworming rates largely increased at endline in both the treatment and control groups. Rates of deworming differed only slightly between the treatment and control groups, and the difference was not statistically significant. However, we found statistically significant increases in deworming between midline and endline for boys and girls in both the treatment and control groups.

Exhibit 15. Rates of Deworming by Gender



4.3. Household Educational Environment

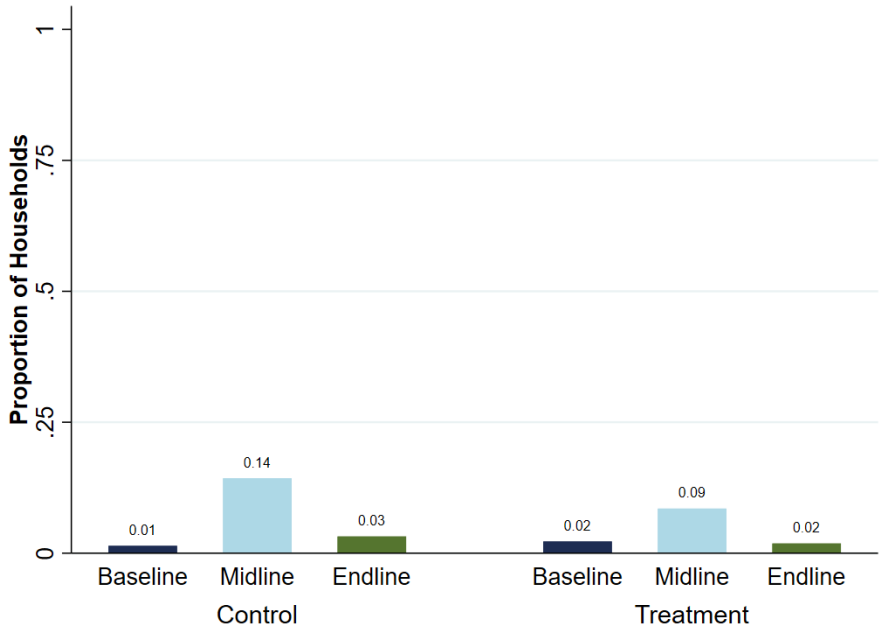
In this section, we describe the home environment of study children by looking at factors that support and encourage children's learning within the home. The household's educational environment and the support for learning that children receive from their parents and other adults are important potential predictors of attainment and performance in preschool.

Presence of Out-of-School Children in the Home

The presence of out-of-school children in the home can be a risk factor for children in the study (Exhibit 16). If the family has school-aged-children[12] who are not attending school, this indicates that the family either has difficulty affording schooling or is disengaged from education. The presence of out-of-school children decreased at endline in both the treatment and control groups. At endline, we found a small and statistically significant difference between the treatment and control groups, with 2 percent of families in the treatment group and 3 percent of families in the control group having out-of-school children.

[12] School-aged -children are defined as any child present in the household that is between the ages of 4 and 15 years old

Exhibit 16. Presence of Out-of-School Children in Study Households



Presence of Reading Materials in the Home

At endline, we asked parents whether their children read any books other than textbooks at home. Although we did not previously report this item, we expected balance between the treatment and control groups because the baseline balance tests showed no differences between the two groups. Exhibit 17 shows that 66.7 percent of parents in the treatment households reported that their child read books other textbooks at home compared with 56.4 percent of parents in the control group.

Exhibit 17. Types of Reading Material Present in Study Households at Endline

	Treatment	Control	*p*-value
Books other than textbooks at home	66.7%	56.4%	**0.00**

Presence *Note.* Data in boldface denotes significance at α=0.05.

Presence of Toys in the Home

Access to play material remained high at endline (Exhibit 18). Toys that require hand-eye coordination were available in 88 percent of the homes compared with 80 percent at midline and 49 percent at baseline. In addition, 66 percent of households had toys that teach about colours and shapes compared with 44 percent at midline and 19 percent at baseline. Toys that teach about counting or numbers were available in 66.4 percent of households at endline compared with 55 percent at midline and 30 percent at baseline. Treatment group households were more likely to have access to toys that teach about counting or numbers as well as toys

that teach about sizes and shapes at baseline, midline, and endline. This difference was statistically significant at all rounds.

Exhibit 18. Types of Play Materials Available in Study Households

	BL		ML		EL		BL vs. ML	ML vs. EL	BL vs. EL
	%	*n*	%	*n*	%	*n*	*p*-value	*p*-value	*p*-value
Any toy	99.8%	1,856	99.8%	1,815	96.0%	1,822	0.73	**0.00**	**0.00**
Homemade toy	82.8%	1,856	84.1%	1,815	n/a	0	0.28	n/a	n/a
Manufactured toys	96.2%	1,856	97.5%	1,815	n/a	0	**0.03**	n/a	n/a
Household objects	91.9%	1,856	91.1%	1,815	n/a	0	0.39	n/a	n/a
Objects found outside	93.2%	1,856	97.5%	1,815	n/a	0	**0.00**	n/a	n/a
Drawing or writing materials	38.7%	1,856	75.4%	1,815	n/a	0	**0.00**	n/a	n/a
Puzzles	6.8%	1,856	11.2%	1,814	n/a	0	**0.00**	n/a	n/a
Toys that require hand-eye coordination	48.6%	1,856	79.6%	1,815	87.8%	1,820	**0.00**	**0.00**	**0.00**
Toys that teach about colours, sizes, or shapes	18.8%	1,856	44.3%	1,815	66.1%	1,818	**0.00**	**0.00**	**0.00**
Toys or games that help teach about numbers or counting	22.9%	1,856	55.0%	1,815	64.4%	1,816	**0.00**	**0.00**	**0.00**

Note. BL = baseline; EL = endline; ML = midline. Data in boldface denotes significance at α=0.05.

5. Baseline Equivalence

As discussed in Section 3.2, we found no evidence of differential attrition in our sample, suggesting that baseline equivalence was maintained. To confirm this assumption, we present in this section results testing for any imbalances in the baseline characteristics across the treatment and control groups based on the endline analytic sample. Specifically, we report the mean differences in baseline values of primary outcomes (test scores) and control variables (household characteristics) between the treatment and control groups. For consistency, we assess balance on the same household characteristics as we did at baseline. For the fidelity of the baseline randomization to hold, we need to maintain that balance between these groups in subsequent rounds (i.e., no differential attrition).

The means and the *p*-values of the *t*-tests for these variables are in Exhibit 19. The balance tables indicate that the equivalence of groups based on baseline characteristics was maintained (i.e., the average characteristics of the treatment and control groups remained statistically equivalent). We tested all the baseline measures and control variables for statistical differences between the two groups using *t*-tests of differences in means across groups. None of the variables analysed here was statistically significantly different, suggesting that the groups were balanced on the baseline characteristics, so any differences in scores we observed at endline were the result of treatment (Exhibit 20).

Exhibit 19. Balance in Baseline Household Characteristics Between Treatment and Control

	Control (1)		Treatment (2)		*t*-test (1 – 2)
	n	Mean (standard error)	*n*	Mean (standard error)	*p*-value
Household size	847	4.69 (0.07)	975	4.77 (0.07)	0.40
Mother can read	845	0.83 (0.02)	971	0.84 (0.01)	0.66
Father can read	847	0.64 (0.02)	969	0.648 (0.02)	0.72
Mother can write	845	0.83 (0.02)	970	0.85 (0.01)	0.44
Father can write	847	0.64 (0.02)	969	0.66 (0.02)	0.56
Number of children between 7 and 10 years old	847	0.26 (0.02)	975	0.27 (0.02)	0.66
Number of children between 11 and 15 years old	847	0.37 (0.02)	975	0.36 (0.02)	0.71
Number of in-school children between 11 and 15 years old	847	0.37 (0.02)	975	0.35 (0.02)	0.41
Number of rooms in the house	846	2.46 (0.06)	975	2.51 (0.04)	0.51
Household has electricity	847	0.99 (0.003)	975	0.98 (0.01)	0.41
Household food expenditures	847	7,051.42 (184.84)	974	7,123.05 (205.70)	0.80
Household education expenditures	551	1,403.85 (95.84]	677	1,544.27 (99.56)	0.31
F-test of joint significance (*p*-value)					0.57
F-test, number of observations					1,220

Exhibit 20. Balance in Baseline IDELA Domain Scores Between Treatment and Control

	Control (1)		Treatment (2)		*t*-test (1 – 2)
	n	**Mean (standard error)**	***n***	**Mean (standard error)**	***p*-value**
Motor development	864	41.65 (1.37)	992	43.02 (1.12)	0.44
Emergent literacy	864	28.65 (1.21)	992	29.21 (1.05)	0.72
Emergent numeracy	864	34.58 (1.08)	992	35.45 (1.21)	0.59
Social and emotional	864	30.30 (1.00)	992	32.00 (0.97)	0.22
Approaches to learning	864	55.02 (1.73)	992	55.91 (1.53)	0.70
Executive function	864	48.05 (1.61)	992	50.50 (1.95)	0.33
Total IDELA score	864	33.79 (1.05)	992	34.92 (0.97)	0.43
F-test of joint significance (*p*-value)					0.79
F-test, number of observations					1,856

Note. Data in boldface denotes significance at α=0.05.

6. Children's Participation in Education

In the 50 treatment catchment areas, children selected for the study were invited to participate in the EYPP at their local school in 2019, whereas those in the control areas would be eligible to attend government preschools the following year. Even so, no rules were in place that required children in treatment areas to attend the EYPP or prevented children in control areas from attending pre-primary schooling in 2019.

6.1. Children's Participation in Pre-primary Programming

Exhibit 21 shows that, in accordance with the study's randomization, half (50%) of the children in the treatment areas attended the EYPP, and only one child in the control group reportedly attended the EYPP (yielding very minimal crossover). Of the children who attended the EYPP,

program attendance records showed high average participation (167 days during the course of the school year) and an average attendance rate of 94 percent. Children's participation rates varied little, with only 19 of the 540 children (4%) attending at a rate less than 80 percent.

In control communities in 2018, 58 percent of the children reportedly had some form of pre-primary education in the past year. In fact, 75 percent of the total sample attended some form of preschool in 2018, including 90 percent enrolment among the treatment group children. Children in our study attended a variety of preschool programs, including *madrasa* programs, BRAC preschool, private preschool, and other public preschool programs. The EYPP seemed to pull few children away from other types of programming, but rather provided preschool to most children who would have otherwise not participated. The remainder of this section discusses the proportion of children who attended each program type by treatment group.

Exhibit 21. Study Children's Participation in Pre-primary Education (Midline Data)

Preschool participation	Treatment group			Control group		
	Girls	**Boys**	**Total**	**Girls**	**Boys**	**Total**
No preschool	48 10.4%	50 9.8%	98 10.1%	173 41.0%	179 42.6%	352 41.8%
EYPP	241 52.3%	244 47.7%	485 49.9%	0 0.0%	1 0.2%	1 0.1%
Other public preschool/school	74 16.1%	83 16.2%	157 16.2%	96 22.7%	78 18.6%	174 20.7%
Madrasa/Islamic Foundation school	55 11.9%	81 15.9%	136 14.0%	74 17.5%	70 16.7%	144 17.1%
BRAC preschool	10 2.2%	17 3.3%	27 2.8%	28 6.6%	32 7.6%	60 7.1%
Private preschool	33 7.2%	36 7.0%	69 7.1%	51 12.1%	60 14.3%	111 13.2%

Note. Data in boldface denotes significance at α=0.05.

6.2. Parental Decision Making Regarding Pre-primary Enrolment

We asked parents about factors that influenced their choice to enrol their child in a specific school. As shown in Exhibit 22, most parents selected the quality of education and the school's closeness to their home as the main reasons why they enrolled their child in a given school. A significantly larger percentage of parents in the treatment groups selected quality of education as the main priority in choosing their child's preschool. On the other hand, more parents in the control group prioritized closeness to home in selecting a preschool for their child. A small

percentage of parents (6.5% in the control group and 1.5% in the treatment group) also prioritized the teaching of Islamic values when deciding whether to enrol their child.

Exhibit 22. Family Priority in Selection of Pre-primary Programming (Endline Data)

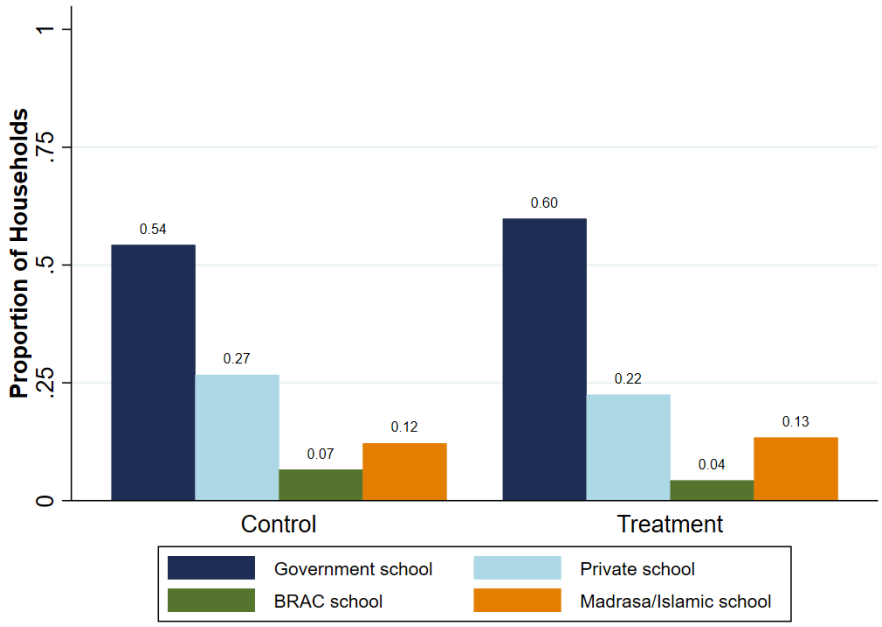
	Treatment		Control		*p*-value
	%	*n*	%	*N*	
Close to home	38.6%	863	47.6%	462	**0.00**
Safe commuting	4.3%	863	4.8%	462	0.69
Low or no cost	2.2%	863	3.0%	462	0.36
Convenient hours of operation	0.7%	863	1.1%	462	0.46
Good quality of education	51.1%	863	35.7%	462	**0.00**
Teach my child Islamic values	1.5%	863	6.5%	462	**0.00**
Influence of community leaders	0.2%	863	0.0%	462	0.30

Note. Data in boldface denotes significance at α=0.05.

6.3. Enrolment Status at Endline

At endline, most children in the treatment and control groups enrolled in public schools. As shown in Exhibit 23, 60 percent of the children in the treatment group enrolled in public schools compared with 54 percent in the control group. About 22 percent of the children in the treatment group enrolled in private schools compared with 27 percent in the control group. The remaining group of children attended Islamic schools and BRAC schools; about 12.5 percent of children enrolled in an Islamic school and about 5 percent enrolled in a BRAC school.

Exhibit 23. Children's Enrolment Status at Endline



6.4. Parental Perceptions of Educational Programming

We also asked parents for their opinions concerning the quality of education in the child's preschool program. As shown in Exhibit 24, most parents in the treatment and control groups had positive perceptions of the quality of educational programming in their child's preschool. For instance, 92.5 percent of the parents in the treatment group and 90.2 percent of the parents in the control group thought that the school did a good job of preparing their children for the future. Very few parents (5.3 percent in the treatment group and 6.7 percent in the control group) thought that going to school exposed their child to harmful people or ideas.

Exhibit 24. Family Perceptions of Quality of Preschool Education (at Endline)

	Treatment		Control		*p*-value
	% True	*n*	% True	*n*	
The school was a good place for my child to be.	89.9%	956	89.6%	820	0.88
The school did a good job preparing children for their futures.	92.5%	956	90.2%	820	**0.09**
Going to school exposed my child to harmful people or ideas.	5.3%	956	6.7%	820	0.22
The school met my child's academic needs.	86.2%	956	85.6%	820	0.73
The school met my child's social and behavioural needs.	86.8%	956	84.4%	820	0.14
Doing well in school will improve my child's chances of having a good life.	96.1%	956	95.4%	820	0.43
This school kept me informed about my child's performance and behaviour.	82.0%	956	79.9%	820	0.25
I like the teacher(s) at the school.	95.8%	956	96.2%	820	0.67
I feel comfortable talking with my child's teacher.	90.4%	956	89.4%	820	0.49
The school is a welcoming place for families like mine.	95.1%	956	94.4%	820	0.51
The school is a safe place for my child.	96.2%	956	95.5%	820	0.43

Note. Data in boldface denotes significance at α=0.05.

7. Implementation of the EYPP[13]

In this section, we share feedback from the EYPP teachers regarding their experiences providing the program and present information regarding the quality of implementation (including open responses from EYPP teachers about program strengths and areas they feel need improvement). We also provide parent ratings for the quality of the EYPP. We gathered these data at midline. The World Bank prepared a separate report that details the costs of providing the EYPP during the treatment year for this study cohort (Fishman & Holla, 2019). We add key information from that cost analysis report here.

[13] This information also appeared in the midline report. We added it here to ensure that all key information about the study is integrated into the endline report.

7.1. Teacher Feedback on the EYPP

We asked EYPP teachers to complete a questionnaire to share their experiences and provide their feedback regarding the EYPP. This questionnaire was completed only for the intervention group; no equivalent teachers were in the control group.

Teacher Perceptions of the EYPP

We asked EYPP teachers about their own perceptions of the relevance of the EYPP and the children's enjoyment of the program. Teachers' responses to the specific survey questions are in Exhibit 25. The majority of EYPP teachers in our study believe that the program is necessary for children, with 84 percent (42 teachers) responding that this claim is very true. Teachers similarly responded that they believe children enjoy attending the program, again with 84 percent claiming that this statement is very true. The results are a bit more mixed when teachers were asked whether children sometimes find the EYPP activities boring. The majority (76 percent) stated this was a little bit true, 12 percent responded that this statement was mostly or very true, and 12 percent responded it was not at all true. Thus, teachers regard the EYPP as necessary, and children appear to be enjoying the program overall, but some activities likely are boring for children.

Exhibit 25. Teacher Perceptions of the EYPP

Item	Response				
	Not at all true	A little bit true	Mostly true	Very true	Don't know
The program is necessary for children in this community.	0 0.0%	0 0.0%	8 16.0%	42 84.0%	0 0.0%
The children enjoy attending the program.	0 0.0%	1 2.0%	7 14.0%	42 84.0%	0 0.0%
Sometimes children find the program activities boring.	6 12.0%	38 76.0%	4 8.0%	2 4.0%	0 0.0%

Alignment of the EYPP With Children's Developmental Needs

We further questioned teachers about their beliefs surrounding the alignment of the EYPP and its activities with children's development needs. The results from this module of the teacher survey are in Exhibit 26.

Exhibit 26. Teacher Ratings of EYPP Alignment With Children's Developmental Needs

Item	Response				
	Not at all true	A little bit true	Mostly true	Very true	Don't know
The program builds children's early mathematics skills well.	0 0.0%	0 0.0%	21 42.0%	29 58.0%	0 0.0%
The program builds children's early literacy skills well.	0 0.0%	4 8.0%	26 52.0%	20 40.0%	0 0.0%
The program builds children's vocabularies.	0 0.0%	7 14.0%	21 42.0%	22 44.0%	0 0.0%
The program builds children's understanding of how the world works.	0 0.0%	11 22.0%	26 52.0%	13 26.0%	0 0.0%
The program builds children's social skills with their peers.	0 0.0%	0 0.0%	11 22.0%	39 78.0%	0 0.0%
The program builds children's ability to behave well in a classroom.	0 0.0%	1 2.0%	10 20.0%	39 78.0%	0 0.0%
The curriculum activities to teach mathematics are too easy for many children in my class.	0 0.0%	8 16.0%	22 44.0%	20 40.0%	0 0.0%
The curriculum activities to teach mathematics are too difficult for many children in my class.	20 40.0%	23 46.0%	7 14.0%	0 0.0%	0 0.0%
The curriculum activities to teach literacy are too easy for many children in my class.	0 0.0%	4 8.0%	25 50.0%	21 42.0%	0 0.0%
The curriculum activities to teach literacy are too difficult for many children in my class.	24 48.0%	21 42.0%	5 10.0%	0 0.0%	0 0.0%
I am able to meet the learning needs of all the children in my class.	0 0.0%	0 0.0%	10 20.0%	40 80.0%	0 0.0%

All teachers felt that the program does a good job of building children's early numeracy skills, and the majority (92%) felt the program also does a good job of building early literacy skills. However, 8 percent felt that the program could improve its ability to build children's early literacy skills. We again found most teachers believe the program does a good job of building children's vocabularies, but 14 percent of the EYPP teachers surveyed feel that is only a little bit true.

Regarding life skills development, all teachers believed that the program builds children's social skills with their peers, and all but one teacher felt that the program builds children's ability to behave well in the classroom. The one skill teachers seemed less sure the program can build is children's understanding of how the world works: 22 percent of the teachers responded it was

a little bit true, 52 percent responded it was mostly true, and 26 percent responded it was very true, suggesting the program and its activities could be strengthened in this area.

Lastly, the majority of teachers (84%–92%) agreed that the curriculum activities for early numeracy and early literacy were generally too easy rather than too difficult for most children in their classrooms. A handful of teachers reported the curriculum was too difficult for some children, but all teachers responded that they were mostly or completely able to meet the learning needs of all the children in their class.

Overall, the results suggest that EYPP teachers think that the program is useful for helping children develop early learning and life skills, but the program activities are a little too easy for many children. However, they generally feel confident in their abilities to meet the learning needs of all children in their EYPP classes.

Preparation to Deliver the EYPP

We asked EYPP teachers about their own preparedness to teach the EYPP curriculum. The results from this section are in Exhibit 27. Overall, teachers generally felt well prepared to teach the EYPP curriculum. However, a few teachers selected a little bit true in response to the statements that (a) the instructions were clear and they knew how to deliver the activities, (b) they had the materials they needed to deliver the activities, and (c) they were able to maintain control of their class while carrying out the curriculum. A small proportion of teachers (2%–10%) did not feel fully prepared to teach the EYPP curriculum, thus it may be important for program implementers to be aware of any constraints to high-quality implementation.

Exhibit 27. Teacher Ratings of Their Preparation to Teach the EYPP

Item	Response				
	Not at all true	A little bit true	Mostly true	Very true	Don't know
I have received adequate training and/or coaching to be able to teach the program well.	0 0.0%	0 0.0%	13 26.0%	37 74.0%	0 0.0%
The instructions for teachers are clear, so I know how to deliver activities in the curriculum.	0 0.0%	1 2.0%	12 24.0%	37 74.0%	0 0.0%
I have the materials I need to deliver the activities in the curriculum.	0 0.0%	5 10.0%	19 38.0%	26 52.0%	0 0.0%
I am able to maintain control of my class while carrying out the curriculum.	0 0.0%	1 2.0%	18 36.0%	31 62.0%	0 0.0%

7.2. Quality of the EYPP

We obtained information on the quality of EYPP implementation from Save the Children quality-monitoring reports and the questionnaires completed by all 50 EYPP teachers. We also asked parents about their perceptions of any preschool programming their child was attending. Here we report the opinions of the parents whose children went to the EYPP specifically.

EYPP Monitoring

Save the Children provided AIR with monitoring results for 29 of the 50 EYPP classes. It is unclear how the 29 classes were selected from the 50. The reports span monitoring visits that took place across the school year. Of the 29 classes assessed, 21 received a grade of A on the monitoring report, four a grade of B, and the remaining three a grade of C. For classes that did not receive an A, the most common issues included the teacher not starting class on time and high rates of absence among children. No other consistent issues emerged.

EYPP Teacher Perceptions of Program Benefits

We asked EYPP teachers, "Based on your experiences, what are the three best things about the program?" Teachers' responses touched on common themes, as shown in Exhibit 28. All 50 teachers provided at least one response, 47 provided two responses, and 34 provided three responses. Most respondents focused on children's development of school readiness skills, social skills and friendships, and familiarity with schooling and school rules; and their opportunities to learn through play/stories, their preparation for the next level (pre-primary), and/or that participation in the EYPP reduced children's fear or hesitation around schooling.

Exhibit 28. EYPP Teacher Perceptions of Benefits of the Program

Response	*n* (%)
Children learn skills (e.g., literacy, mathematics, shapes, colours, puzzles, motor, life skills).	36 (72.0%)
Children learn social behaviours/make friends.	25 (50.0%)
Children are developing the habit of schooling/study habits/learning school rules.	23 (46.0%)
Children can learn a lot through playing/stories.	18 (36.0%)
Children are becoming prepared for the next grade.	12 (24.0%)
The program reduces children's hesitation/fear of school.	8 (16.0%)
The program will reduce student dropout.	6 (6.0%)
Children are protected/cannot be harmed.	2 (4.0%)
Children at age 4 get free schooling.	2 (4.0%)
Parents learn about child development.	1 (2.0%)

EYPP Teacher Recommendations for Program Improvement

We asked EYPP teachers, "Based on your experiences, what three things most need to be improved about the [EYPP] curriculum?" Of the 50 teachers, three stated that they did not feel improvements were necessary. Of the remaining teachers, 47 made at least one suggestion, 37 made at least two suggestions, and 21 made three suggestions. Exhibit 30 lists all responses provided by two or more teachers (i.e., recommendations made by just one individual are not included). Responses covered both working conditions for teachers and the learning needs and experiences of the children (see Exhibit 29).

Exhibit 29. EYPP Teacher Recommendations to Strengthen the Curriculum

Response	*n* (%)
Increase the honorarium for teachers/use a fixed pay scale.	19 (38.0%)
Provide monthly teacher training.	16 (32.0%)
Provide more books with images that teach numerals, colours, etc.	14 (28.0%)
Provide sports equipment.	13 (26.0%)
Provide more books in the classroom.	6 (12.0%)
Have books available to send home with children.	5 (10.0%)
Provide a larger classroom.	4 (8.0%)
Provide cards/images to support children's counting with blocks.	4 (8.0%)
Provide alphabet blocks/cards/puzzles.	3 (6.0%)
Provide ongoing training (after Save the Children discontinues support).	3 (6.0%)
Enhance training for parents/information for parents about importance of schooling.	3 (6.0%)
Provide new tools (not specified).	3 (6.0%)
Start teaching letters and numbers earlier in the school year.	2 (4.0%)
Provide the children with boards for writing.	2 (4.0%)

EYPP Teacher Recommendations for Improved Teacher Support

We asked EYPP teachers, "Based on your experiences, are there any things that should be improved about the training or support that teachers receive to deliver the program?" Of the 50 teachers, 33 said yes. Teachers who said yes could then provide up to two suggestions; eight teachers provided two suggestions, and 25 provide one suggestion. Exhibit 30 lists all responses provided by two or more teachers (i.e., recommendations made by just one individual are not included). Many of the suggestions overlapped with responses to questions about program improvement (see Exhibit 31).

Exhibit 30. EYPP Teacher Recommendations to Improve Teacher Support

Response	*n* (%)
Increase the honorarium for teachers/use a fixed pay scale.	12 (44.0%)
Provide monthly teacher training.	5 (10.0%)
Regular oversight visits to the school to ensure transparency and accountability.	3 (6.0%)
Provide job security.	2 (4.0%)
Make the school permanent.	2 (4.0%

On average, EYPP parents had positive perceptions of the program (Exhibit 31). Specifically, most parents reported that the school was a good place for their child to be, prepared them well for the future, and met their child's academic and social and behavioural needs. EYPP parents felt comfortable with and liked their child's preschool teacher and the school environment. It is important to note that parents in the treatment group whose children attended other types of preschool reported similarly high ratings for those other types.

Exhibit 31. Parent Perceptions of the EYPP

Item	Not at all true	A little bit true	Mostly true	Very true
The school was a good place for my child to be.	1 0.8%	39 8.0%	106 21.8%	330 69.3%
The school did a good job preparing children for their futures.	2 0.4%	19 3.9%	197 40.5%	268 55.1%
Going to school exposed my child to harmful people or ideas.	438 90.1%	29 6.0%	7 1.4%	12 2.5%
The school met my child's academic needs.	0 0.0%	62 12.8%	176 36.2%	248 51.0%
The school met my child's social and behavioural needs.	4 0.8%	55 11.3%	172 35.4%	255 52.5%
Doing well in preschool will improve my child's chances of having a good life.	0 0.0%	16 3.3%	124 25.5%	346 71.2%
This preschool kept me informed about my child's performance and behaviour.	8 1.7%	60 12.4%	148 30.5%	270 55.6%
I like the teacher(s) at the preschool.	0 0.0%	8 1.7%	96 19.8%	382 78.6%
I feel comfortable talking with my child's preschool teacher.	0 0.0%	23 4.7%	120 24.7%	343 70.6%
The preschool is a welcoming place for families like mine.	0 0.0%	25 5.1%	94 19.4%	367 75.5%
The preschool is a safe place for my child.	0 0.0%	15 3.1%	77 15.8%	394 81.1%

8. Intervention Effects

In this section, we present estimated impacts on children's development.[14] Each section that follows highlights the results from the ITT analysis using ANCOVA methods by IDELA skill domain. We then present effects of the LATE analysis using an instrumental variable approach to identify the impact of the program for those children in the treatment group who actually attended EYPP programming. As at midline, we examined the extent to which the household educational environment predicted variation in child outcomes and did not find any significant variation in effects along this dimension. This may be caused by the fact that the quality of the household educational environment was high across the study groups.

[14] Full regression results are in Appendix F.

8.1. Children's Cognitive Development

We first present the estimated effects of the EYPP on children's cognitive development. As described, the IDELA tool assesses children's emergent literacy and language development, emergent numeracy development, executive function, and approaches to learning. Scores are presented as the percentage correct overall and for each specific domain. Although no official benchmarks exist for what constitutes proficiency on a given IDELA item, Save the Children informally uses a score of 75 percent on the overall assessment and within individual domains as an indication of mastery. Therefore, we also used this cut off as a representation of mastery. We present the proportion of children mastering each subskill by domain in Appendix D. The following subsections describe the midline and endline effects of the program for each subskill.

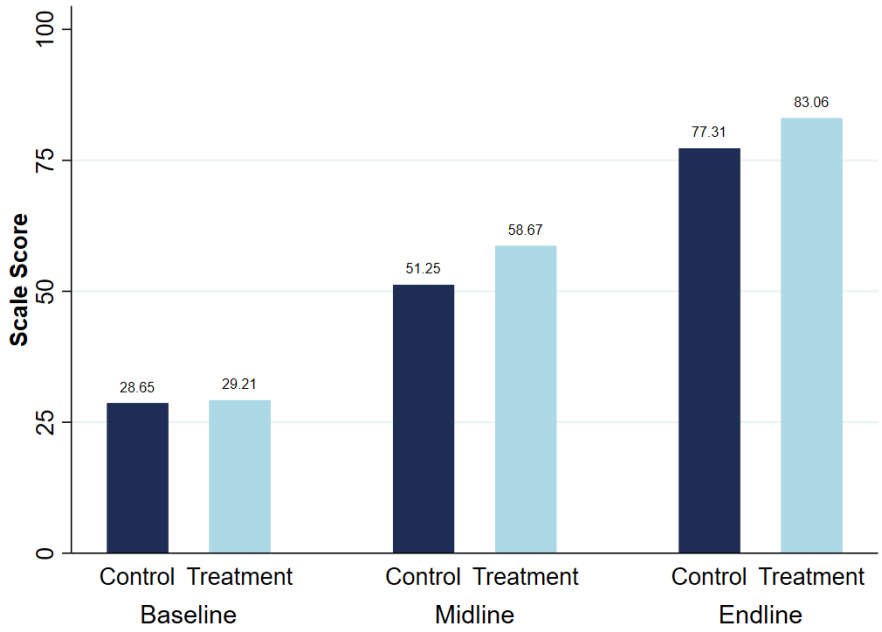
Emergent Literacy and Language

The emergent literacy module assesses children's oral language knowledge, decoding skills, writing skills, and oral comprehension. We combined the percentage correct scores from all subskills to generate an overall emergent literacy score (calculated as the total percentage correct for all domain items divided by the total number of items in this domain multiplied by 100). For the emergent literacy domain, children's scores are based on 55 total points. We found increases in scores for children in both the treatment and control groups from baseline to endline (Exhibit 32). The scores for children in the treatment group increased from 29.21 points to 58.67 points to 83.06 points from baseline to midline to endline, resulting in a significant impact on literacy scores at both midline and endline, which translates into 6.42 points or an effect size (ES) of 0.25 standard deviation ($p < .01$) and 4.76 points or an ES of 0.23 ($p < .01$) at midline and endline, respectively. For children in the treatment group who actually attended EYPP programming, we found the LATE effect on emergent literacy to be almost double the ITT effect—resulting in an increase of 12.69 points at midline (ES = 0.48, $p < .01$) and 9.40 points at endline (ES = 0.44, $p < .01$).

We further examined differences in emergent literacy for boys and girls.[15] We found that the effect of the EYPP on emergent literacy was larger for girls than boys at both midline and endline. Specifically, we found that, on average, EYPP increases girls' literacy scores by 8.44 points (ES = 0.32, $p < .01$) at midline and 6.26 points (ES = 0.30, $p < .01$) at endline, whereas it only increases boys' literacy scores by 4.61 points (ES = 0.18, $p < .01$) at midline and 3.40 points (ES = 0.16, $p < .01$) at endline. Notably, for both genders, the ITT is positive and highly significant. When examining the effect for girls and boys conditional on adherence to randomized treatment, we found comparable results, suggesting that the effect of EYPP was strongest for girls. The LATE for girls was an increase of 16.83 points (ES = 0.64, $p < .01$) at midline and 12.65 points (ES = 0.60, $p < .01$) at endline.

[15] We also examined differences by mother and father educational status, but did not find significant results so have excluded those from this write-up.

Exhibit 32. Children's Performance in Language and Literacy

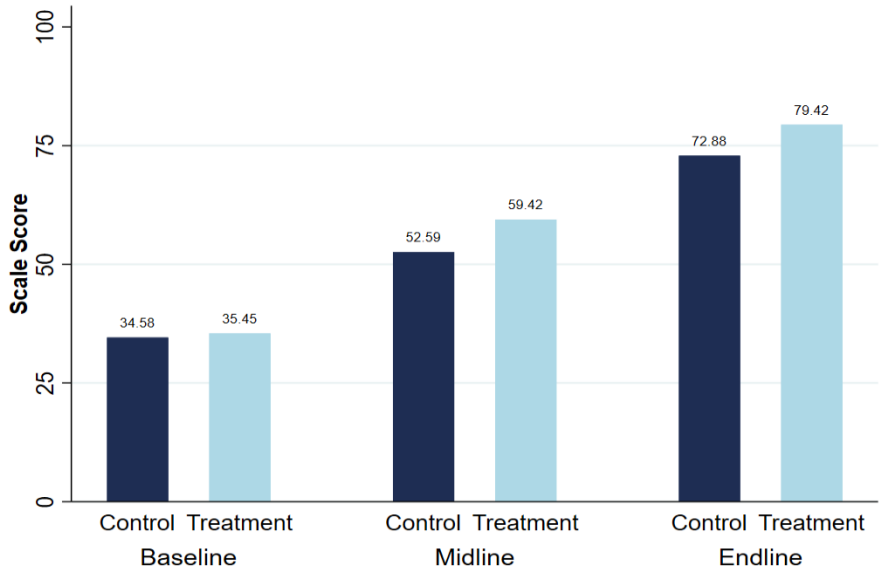


Emergent Numeracy

The numeracy module of the IDELA captures children's emergent numeracy by testing a progression of skills that contribute to proficiency in mathematics. Specifically, the module assesses children's knowledge of and ability to recognize numbers and patterns, compare quantities, and manipulate numbers with addition and subtraction. Across all subtasks within the numeracy domain, children can score a maximum of 43 points. We again found that scores were significantly higher for children in the treatment group at midline and endline; the positive impacts seen at midline persisted through endline (Exhibit 33). The estimated ITT effect at midline was 5.71 points (ES = 0.30, $p < .01$) and at endline was 5.33 points (ES = 0.30, $p < .01$), whereas the LATE effect was 11.28 points (ES = 0.60, $p < .01$) at midline and 10.54 points (ES = 0.57, $p < 0.01$) at endline.

For numeracy scores, we again found larger effects for girls than boys ($p < .01$). At midline, the ITT for girls was an increase of 7.37 points (ES = 0.38, $p < .01$), whereas for boys, treatment increased scores only by 4.21 points (ES = 0.21, $p < .01$). At endline, scores increased for girls in treatment communities by 7.38 points (ES = 0.42, $p < .01$) and by 3.50 points (ES = 0.20, $p < .01$) for boys in treatment communities. Similarly, the LATE for girls at both midline and endline was an increase of 13.52 points (ES = 0.69 and 0.77, $p < .01$), whereas the LATE for boys was 9.15 points (ES = 0.46, $p < .01$) at midline and 7.70 points (ES = 0.44, $p < .01$) at endline.

Exhibit 33. Children's Performance in Numeracy

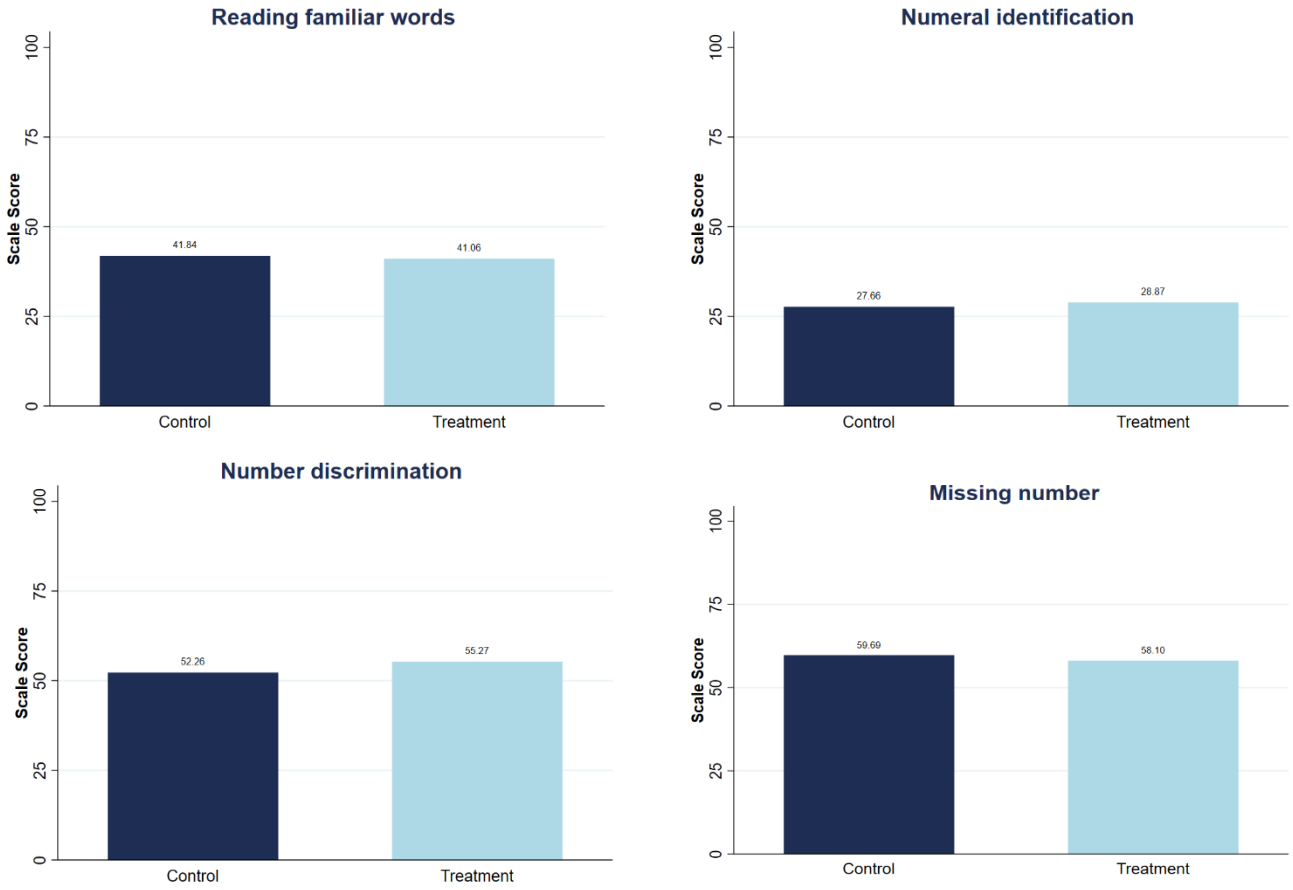


EGRA and EGMA

At endline, we added a few subtasks from the EGRA and EGMA tests to supplement the skills tested in the IDELA tool as we were worried about literacy and numeracy ceiling effects. Specifically, we administered the familiar words task from the EGRA and the number identification, number discrimination and missing number tasks from the EGMA. These EGRA and EGMA modules are systematically more difficult than the subtasks from the IDELA. Across all these tasks, children in the treatment and control group scored relatively similar (Exhibit 34). We ran ordinary least squares regression analysis controlling for treatment status to identify the ITT at endline but find no evidence of any effects on EGRA or EGMA subtasks between treatment and control children. Similarly, when looking at differences by gender, we again find no evidence of an effect of treatment on EGRA or EGMA tasks scores. Given that these tasks are designed for children in the early grades, and go beyond what they would typically learn at the pre-primary level it is not surprising that we did not find any significant intervention effects.

We do, however, find that males scored significantly lower than females on familiar word reading in our LATE analysis. The LATE for girls was an increase of 7.45 points (ES = 0.18, $p > .10$), whereas the LATE for boys was a decrease of 11.06 points (ES = 0.45, $p < .01$).

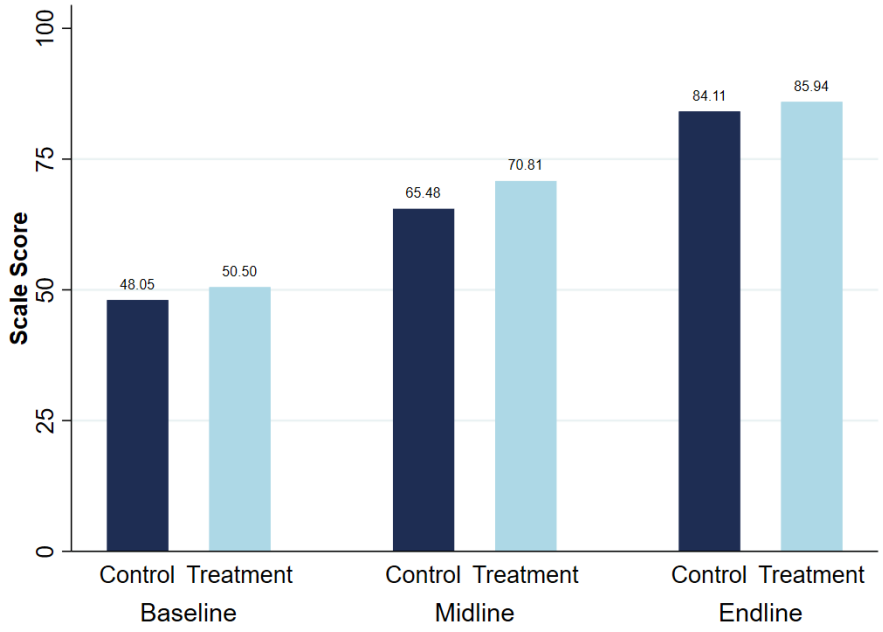
Exhibit 34. Children's Performance on EGRA and EGMA Tasks



Executive Function

In the IDELA, executive function measures children's short-term memory and their inhibitory control (i.e., cognitive processes that are necessary for controlling one's ability to overcome a natural or dominant behavioural response to implement more goal-oriented behaviour). Although children's executive function scores increased for both the treatment and control groups from baseline to endline (Exhibit 35), we did not find that availability of the EYPP had a significant impact at either midline or endline. We similarly found no evidence of an effect on executive function when focusing exclusively on the students who actually attended EYPP programming. Although our estimates suggest that girls in treatment communities may have had higher score increases than boys in treatment communities, these differential effects are likewise not significant.

Exhibit 35. Children's Performance in Executive Function

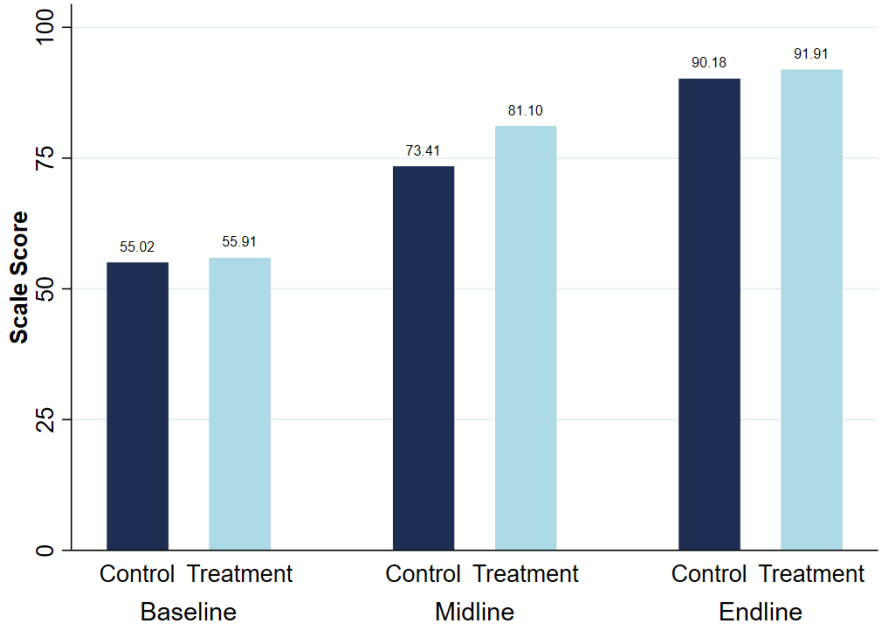


Approaches to Learning

The IDELA module on approaches to learning attempts to gauge children's readiness to learn by assessing children's curiosity and eagerness to learn and their ability to tackle challenges, follow directions, and take risks. Children's scores on this module follow the same trends as previous modules, with evident increases between baseline and endline for both the treatment and control groups (Exhibit 36). Although we found a significant impact of EYPP on approaches to learning at midline of 6.58 points (ES = 0.26, $p = 0.01$), this effect disappeared by endline, suggesting that students in other preschool programming catch up to their peers attending EYPP with respect to their approaches to learning skills. LATE results found that EYPP attendees in the treatment group scored 13.00 points (ES = 0.51, $p < .01$) higher than their peers in the

control group not attending EYPP at midline, but no such effect remained for these students by endline.

Exhibit 36. Children's Performance in Approaches to Learning



We found that approaches to learning scores differed significantly for girls and boys at midline, but neither gender had a treatment effect at endline. The ITT impact of EYPP at midline led to an increase of 8.53 points (ES = 0.33, $p < .01$) for girls and 4.83 points (ES = 0.23, $p < .05$) for boys. This same pattern was observed in our LATE analysis; treated girls' scores increased by 15.26 points (ES = 0.59, $p < .01$), and treated boys' scores increased by 10.86 points (ES = 0.43) at midline, whereas we found no evidence of significant impacts on compliers at endline. The differential impact by gender at midline was only marginally statistically significant ($p < .10$).

8.2. Children's Social-Emotional and Motor Development

In this section, we present the results from the remaining IDELA domains: social-emotional development and motor skills development. The following subsections describe the estimated effects of EYPP programming on these outcomes at endline.

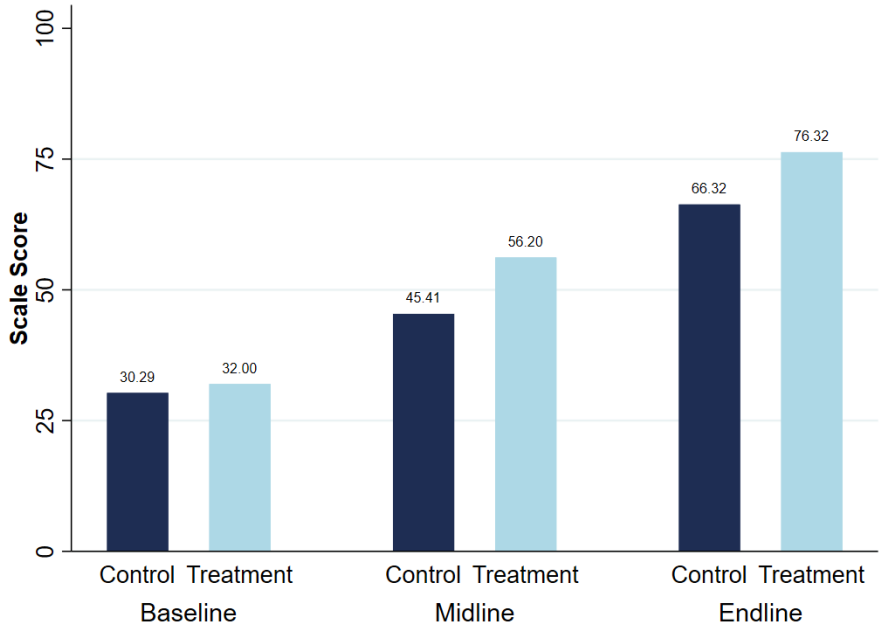
Social-Emotional Development

To measure social-emotional development, the IDELA assesses skills that facilitate children's ability to appropriately interact and build relationships with peers, authorities, and family. This module specifically looks at children's self-awareness, emotional awareness, and empathy and their ability to solve conflicts, with scores based on a total of 25 points. As with all other modules, we see scores increasing for both groups across time (Exhibit 37). We found significant effects of EYPP on children's social-emotional development at midline, with EYPP

students scoring, on average, 8.83 points higher than non-EYPP students (ES = 0.37, $p < .01$). This effect was sustained through endline, where we found an effect of 7.96 points (ES = 0.34, $p < .01$). The LATE results followed a similar trend, with an increase in EYPP attendee's scores of 17.56 points (ES = 0.72, $p < .01$) and 15.73 points (ES = 0.68, $p < .01$) at midline and endline, respectively.

Although we found overall impacts on children's social-emotional development, we did not find evidence of differential impacts between boys and girls from our ITT and LATE analyses. Our evidence again suggests slightly larger impacts for girls than boys, although this potential difference is not statistically significant.

Exhibit 37. Children's Social-Emotional Development

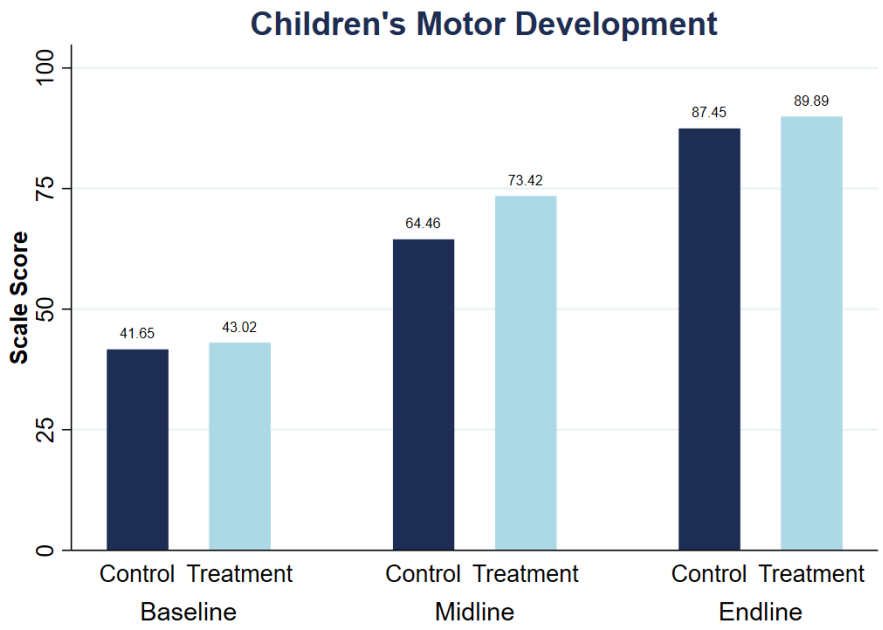


Gross and Fine Motor Development

The final domain assessed by the IDELA is children's healthy motor development and functioning. The administration of this module has children hop, copy a shape, draw a person, and fold a piece of paper. As with all domains, children's motor development scores increased between baseline and endline for both the treatment and control groups (Exhibit 38). These observed increases corresponded to a significant impact at midline of 7.41 points (ES = 0.28, $p = .01$), but this impact dissipated by endline. Similarly, we found a LATE of 14.64 points (ES = 0.55, $p < .01$) for treatment students who attended EYPP programming at midline compared with those in the control group who did not. We again found no evidence of a sustained impact in our LATE analysis at endline. Lastly, although we found the EYPP had a sizable and statistically significant ITT effect at midline on motor development scores, we did not find evidence of a difference in this midline impact between boys and girls, and the null

effects at endline were the same for both genders. We did, however, find a significant difference in impacts for compliers at midline; the LATE for compliant girls was an increase of 17.36 points (ES = 0.65, $p < .01$), and the LATE for compliant boys was an increase of 12.04 points (ES = 0.46, $p < .05$). We observed no positive effects in our LATE analysis at endline.

Exhibit 38. Children's Motor Development



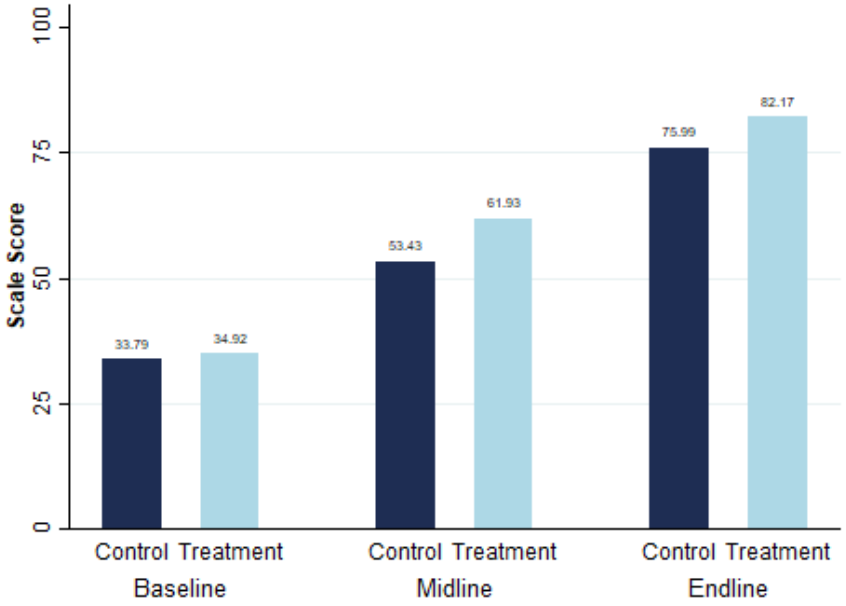
8.3. Children's Overall School Readiness Score

In this section, we present the results from impact analyses on the overall IDELA (or school readiness) score encompassing all of the above-mentioned domains. As with all the individual domains, children's school readiness scores increased between baseline and endline for both the treatment and control groups (Exhibit 39). These observed increases corresponded to a significant impact at midline of 7.10 points (ES = 0.34, $p < .01$), and an impact of 4.70 points at endline (ES = 0.29, $p < .01$). Similarly, we found a LATE of 14.02 points (ES = 0.68, $p < .01$) for treatment students who attended EYPP programming at midline compared with those in the control group who did not. We found evidence of a sustained impact in our LATE analysis at endline with a LATE of 9.29 points (ES = 0.57, $p < .01$).

Lastly, we found that children's overall school readiness scores differed significantly for girls and boys at both midline and endline. The ITT impact of EYPP at midline led to an increase of 8.67 points (ES = 0.42, $p < .01$) for girls and 5.69 points (ES = 0.28, $p < .05$) for boys. The ITT at endline led to an increase of 5.83 points (ES = 0.36, $p < .01$) for girls and 3.69 points (ES = 0.23, $p < .05$) for boys. This same pattern was observed in our LATE analysis; EYPP girls' scores increased by 16.53 points (ES = 0.80, $p < .01$), and EYPP boys' scores increased by 11.64 points

(ES = 0.57, $p < .05$) at midline, and EYPP girls' scores increased by 11.08 points (ES = 0.69, $p < .01$) and EYPP boys' scores increased by 7.60 points (ES =0.47, $p < .05$).

Exhibit 39. Children's Overall Readiness Score



8.4. Family Support for Education

In this section, we address impact effects on the extent to which children received learning stimulation at home, and on parental investment in education.

Stimulation in the Home for Child Development

More study children participated in activities with adults in their households at endline than at baseline and midline. We expected these changes because as children became older, families felt that it was increasingly important for them to engage in learning-oriented activities. As shown in Exhibit 40, at endline, 88 percent of the children had read with an adult in their household in the prior week compared with 80 percent at midline. Similarly, 60 percent of the children had played a simple game with an adult at endline compared with 50 percent at midline. We detected similar increases in almost every other type of activity except playing counting games, for which the percentage of children participating slightly decreased at endline but remained high compared with the baseline. At endline, children in the treatment group were more likely to engage in activities such as storytelling, object naming and counting games at home than children in the control group.

Exhibit 40. Study Child Participation in Activities With Household Member in Past Week

	Baseline			Midline			Endline		
	Treatment	Control	*p*-value	Treatment	Control	*p*-value	Treatment	Control	*p*-value
Read books or looked at pictures	68.6%	68.2%	0.83	83.8%	75.8%	**0.00**	89.3%	88.4%	0.54
Told stories	68.5%	66.3%	0.31	74.3%	73.0%	0.55	80.7%	76.9%	**0.04**
Sang songs or lullabies	63.6%	64.7%	0.63	66.2%	62.5%	0.10	66.2%	62.5%	0.10
Took the child outside	69.9%	77.3%	**0.00**	73.8%	76.5%	0.18	75.4%	77.7%	0.25
Played simple games	53.3%	49.5%	0.10	53.0%	47.6%	**0.02**	61.0%	55.1%	**0.01**
Named objects or drew	24.3%	22.2%	0.29	50.0%	38.8%	**0.00**	63.1%	59.0%	**0.08**
Showed or taught something new	54.6%	58.0%	0.15	68.8%	62.0%	**0.00**	79.2%	77.1%	0.28
Taught the alphabet or encouraged to learn letters	79.6%	78.7%	0.62	90.3%	87.8%	**0.08**	87.8%	89.6%	0.22
Played a counting game or taught numbers	55.1%	48.8%	**0.01**	70.0%	70.0%	1.00	69.5%	65.2%	**0.05**

Note. Data in boldface denotes significance at α=0.05.

The prevalence of positive interactions between children and caregivers stayed at 99 percent at endline. However, negative interactions mostly decreased at endline except for instances of parents criticizing or yelling at their child. These midline-endline increases were not statistically different for the treatment and control groups. Exhibit 41 shows that positive interactions were more prevalent than negative interactions. Yet, negative forms of interaction were common in both research groups.

Exhibit 41. Social-Emotional Interaction at Home in Past Week

	Baseline			Midline			Endline		
	Treatment	Control	*p*-value	Treatment	Control	*p*-value	Treatment	Control	*p*-value
Hug or show affection	94.5%	94.3%	0.91	99.7%	99.4%	0.36	99.4%	99.6%	0.43
Spank child for misbehaving	35.2%	35.0%	0.92	42.7%	47.9%	**0.03**	40.3%	42.1%	0.43
Hit child for misbehaving	45.7%	48.3%	0.26	46.3%	50.1%	0.10	46.1%	47.0%	0.69
Criticize or yell at child	63.4%	62.2%	0.58	72.2%	75.3%	0.14	81.0%	82.6%	0.37

Note. Data in boldface denotes significance at α=0.05.

Lastly, we examined the differences in parental investment in their children's pre-primary education based on self-reported schooling costs. We first looked at payments made at midline and then payments at endline. We also focus our analysis on the differences based on study group and then by EYPP enrolment.

Parental Investment in Children's Pre-Primary Education at Midline

We found that money parents reporting spending on sending their child to pre-primary programming was fairly consistent across treatment and control groups (Exhibit 42). Parents in the control group spent significantly more money on school supplies, snacks, and meals for school as well as private tutoring. On average, parents in the control group reported spending 81.41 taka more on school supplies, 252.41 taka more on snacks and meals, and 148.58 taka more on private tutoring than parents in the treatment.

Exhibit 42. Parental Investment in Children's Pre-Primary Education at Midline by Study Group (in Taka)

	Treatment		Control		P-value of diff.
	Mean	N	Mean	N	
Direct payments to school (school fees)	848.01	964	867.97	837	0.75
Other activity fees	33.66	964	36.76	837	0.55
School uniforms	395.10	964	421.48	837	0.21
School supplies such as a backpack, notebooks, pencils, and so on	789.10	964	858.84	837	**0.02**
Snacks or meals child must bring to school	1322.98	964	1552.23	837	**0.00**
Transportation to bring child to school	266.26	964	225.67	837	0.31
Private tutoring	464.17	964	602.76	837	**0.01**
Other costs	2.31	964	3.17	837	0.76

Note. Data in boldface denotes significance at α=0.05. All monetary units reported in Bangladesh Taka.

Next, we examined differences in parental investments at midline for families who sent their children to EYPP compared to those who attended other preschool programs (Exhibit 43). We found that parents whose children attended EYPP programming reported paying significantly less across all payment types with the exception of school fees at midline. Parents of EYPP attendees paid less for other activity fees, uniforms, school supplies, snacks and meals, transportation and private tutoring.

Exhibit 43. Parental Investment in Children's Pre-Primary Education at Midline by EYPP Enrolment

	EYPP		Other Preschool		P-value of diff.
	Mean	N	Mean	N	
Direct payments to school (school fees)	797.85	490	879.50	1,311	0.24
Other activity fees	23.84	490	39.31	1,311	**0.01**
School uniforms	370.64	490	421.09	1,311	**0.03**
School supplies such as a backpack, notebooks, pencils	728.70	490	856.20	1,311	**0.00**
Snacks or meals child must bring to school	1309.95	490	1474.22	1,311	**0.00**
Transportation to bring child to school	142.47	490	286.61	1,311	**0.00**
Private tutoring	327.82	490	603.62	1,311	**0.00**
Other costs	0	490	3.72	1,311	0.24

Note. Data in boldface denotes significance at α=0.05. All monetary units reported in Bangladesh Taka.

Parental Investment in Children's Pre-Primary Education at Endline

We also compared parental investment at endline and found many significant differences by spending category between parents in the treatment and control group (Exhibit 44). Overall, parents of children in the control group reported spending less on all cost categories except for school uniforms.

Exhibit 44. Parental Investment in Children's Pre-Primary Education at Endline by Study Group (in Taka)

	Treatment		Control		P-value of diff.
	Mean	N	Mean	N	
Direct payments to school (school fees)	492.19	964	444.52	837	0.28
Other activity fees	34.65	964	24.92	837	0.05
School uniforms	143.28	964	150.13	837	0.65
School supplies such as a backpack, notebooks, pencils	475.38	964	375.34	837	**0.00**
Snacks or meals child must bring to school	1093.02	964	825.58	837	**0.00**
Transportation to bring child to school	103.67	964	91.75	837	0.67
Private tutoring	192.94	964	34.63	837	0.90
Other costs	0.11	964	2.29	837	0.08

Note. Data in boldface denotes significance at α=0.05. All monetary units reported in Bangladesh Taka.

Finally, we examined differences in reported spending on children's pre-primary education at endline for parents whose children attended EYPP programming compared to those who attended other pre-primary programs (Exhibit 45). Across most cost categories, we found that EYPP parents reported spending significantly less than their non-EYPP counterparts at endline except for on school snacks.

Exhibit 45. Parental Investment in Children's Pre-Primary Education at Endline by EYPP Enrolment (in Taka)

	EYPP		Other Preschool		P-value of diff.
	Mean	N	Mean	N	
Direct payments to school (school fees)	400.66	490	495.97	1,311	0.05
Other activity fees	32.78	490	29.14	1,311	0.52
School uniforms	88.00	490	168.31	1,311	**0.00**
School supplies such as a backpack, notebooks, pencils	440.64	490	424.49	1,311	0.57
Snacks or meals your child must bring to school	1223.27	490	873.59	1,311	**0.00**
Transportation to bring your child to school	0	490	134.81	1,311	**0.00**
Private tutoring	90.20	490	234.74	1,311	**0.00**
Other costs	0	490	1.55	1,311	0.26

Note. Data in boldface denotes significance at α=0.05. All monetary units reported in Bangladesh Taka.

9. Answers to the Research Questions

In this section, we present answers to the research questions (three primary and seven secondary), based on cumulative findings from baseline to midline to endline. We address the implications of these findings in the Conclusions and Recommendations section.

9.1. Answers to the Primary Research Questions

The primary research questions for this evaluation addressed program impacts on children's development, plus the benefits of providing the EYPP relative to its costs.

We found lasting positive programme effects on children's development in early literacy, numeracy, social and emotional learning, and overall school readiness. While both girls and boys benefitted from the EYPP, girls benefitted more.

1. What is the impact of offering an additional year of preschool on the cognitive development of young children in a rural setting?

We looked at cognitive development in terms of children's emergent literacy, numeracy, executive function, and approaches to learning. At midline, we found positive EYPP impacts on children's cognitive development in literacy, numeracy, and approaches to learning but not in

executive function. The positive effects were moderate in magnitude, equivalent to bridging the gap between children whose mothers did versus did not complete a primary education, and we found significantly greater benefits for girls than for boys in all three areas that showed positive effects (literacy, numeracy, and executive function). We also found significant, sustained positive intervention effects on children's overall school readiness (across all IDELA tasks), with a significantly greater intervention effects for girls than for boys.

At endline, the intervention effects persisted for both emergent literacy and emergent numeracy, but the effects on approaches to learning faded to insignificance, with still no significant program effect on executive function. For both literacy and numeracy, the effect sizes were relatively stable between midline and endline, meaning that the gaps between the treatment and control groups persisted (but did not widen or narrow). Therefore, the persisting effects of the EYPP are in the areas of academic learning (here, literacy and numeracy) and not on other areas such as motor development or approaches to learning. This result is not surprising, as the main goal of the intervention is to prepare children for schooling. At both timepoints and in both areas of development, girls obtained a significantly larger benefit from the intervention than did boys (although boys still benefitted, as well).

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?

At midline, the EYPP had a positive effect on children's social and emotional learning and a positive effect on children's motor development. In both areas, although girls showed somewhat greater program benefits than boys, the differences did not reach the level of statistical significance.

At endline, the EYPP impacts persisted for social and emotional learning. The gaps between the treatment and control groups were similar at both midline and endline. This result is consistent with the EYPP approach of providing a play-based learning environment (where children are likely to build social skills), rather than a more formal kind of classroom experience. We did not find any significant difference in program impacts for girls versus boys. In the area of motor development, at endline, we no longer detected a significant impact for the EYPP and did not find significant differences in impacts for girls versus boys.

3. What is the benefit relative to the cost of offering an additional year of preschool with regard to learning and development outcomes?

According to an unpublished 2019 report prepared by the World Bank, the midpoint cost estimate suggested a total annual cost of USD $157,155 to provide the EYPP in the 50 intervention communities. Information from financial reports that involved expenditures per child indicate there were 1,084 beneficiaries, and thus the estimated total costs translate into an annual unit cost of $145 per child. Note that these estimates capture the *total* costs of

providing the EYPP, including contributions from the communities, resources offered by schools (such as classrooms), oversight, and so on (Fishman & Holla, 2019).[16]

9.2. Answers to the Secondary Research Questions

Of the seven secondary questions, we were able to answer five completely. For two, a lack of variability in data impeded our ability to provide meaningful answers.

By offering the EYPP, communities enrolled children in preschool who would not have participated otherwise.

1. What is the mechanism through which the intervention affects the outcomes of interest?

A key finding is that when the EYPP became available in a community, it seemed to pull few children away from other programming options (such as Islamic Foundation or BRAC preschools) and mostly attracted children who would not have attended preschool otherwise. We did not find evidence that the EYPP produced any significant effects by changing the household educational environment, and parents in the treatment group whose children attended the EYPP did not feel more positive about their child's preschool than did parents whose children went to other programs.

Although we cannot just focus on the children in the EYPP versus no program—because of pre-existing differences between the two groups and because the control group also performed fairly well—it is possible that the EYPP achieves its effects by providing a preschool experience to children who would otherwise not have had one (rather than being better than other available preschool programming).

2. Is the age at which the children start preschool an important factor?

Participants in the first year of the EYPP (prior to the study cohort's entry into the program) were from a broad age range. For the study cohort, we restricted the age band to include only children who were 1 year away from on-time enrolment in the one-year government pre-primary class. With few exceptions, the programme was offered only to children identified as being in the target age range based on our study census. Therefore, we cannot conduct any analyses to detect differences in program effects based on the age at which children began the EYPP.

[16] If comparing these costs to estimates from other programmes, it is very important to ensure that the estimates from the other programming are similarly constructed (rather than just reflecting the portion of the total cost that is captured in programme or school budgets).

3. Is the time spent in the preschool program an important factor?

EYPP attendance was very high, with more than 96 percent of the enrolled children attending at least 80 percent of the sessions. Given the very high level of program participation, it was not feasible to look at differences in program effects based on attendance levels among the enrolled children.

4. What elements of the EYPP appear to be most important in achieving the program's impacts?

Nearly all families could meet their children's needs and provide materials to support their learning and development. For example, food insecurity was very low among the study participants (information gathered only at baseline), few children were in poor health, and the rates of diarrheal disease were low (although respiratory illness was very common). Nearly all households had books available (children's books, textbooks, and/or religious books), and nearly all had store-bought toys, writing/drawing materials, and/or educational toys. Across both the treatment and control groups, about half of the children participated in other preschool programming, indicating that such programming is available to many children even without the EYPP. As noted previously, the EYPP seemed to serve mostly children who did not have other programming available or whose parents chose not to enrol them in other available programming. Therefore, we believe that the EYPP has a beneficial effect by providing preschool to children in a community who would not have participated otherwise.

Pre-primary teachers can deliver the EYPP with a high level of fidelity. The teachers were very positive about the EYPP and felt well prepared to provide it.

5. To what extent is the program implemented with fidelity?

Based on the monitoring information available, the program was implemented with a high level of fidelity. Where classes had lower levels of fidelity, the issues tended to involve instructional time for children (e.g., class starting late and some attendance difficulties, although attendance issues were minimal overall). The monitors noted few concerns regarding program delivery.

6. What do teachers think about the training activities and materials? How can the training be improved?

All EYPP teachers felt that they had adequate training and coaching to deliver the curriculum effectively. All but one teacher felt that the instructions were clear, and they knew how to deliver the program activities, and all but one was able to manage their classes effectively. Ninety percent of the teachers reported that they had the materials they needed to deliver the curriculum. When asked about how to improve the program, 10 percent of the teachers felt that monthly training would be beneficial for them. So overall, teachers were very positive about the training and materials.

7. What challenges did teachers encounter when implementing the EYPP curriculum?

Nearly all teachers felt that they knew how to implement the curriculum and had the materials needed to do so. All but one teacher was able to maintain control of their classes while carrying out the curriculum, and all felt that they were able to meet the learning needs of the children in their classes. When asked how programming could be improved, a minority of teachers requested additional materials, especially books (e.g., more books with images to teach numerals, colours; more books in general; and books that they could send home with children) and sports equipment. So overall, teachers were very confident in delivering the curriculum and identified very few challenges.

When asked for their perceptions of the appropriateness of the curriculum for the children's needs, all EYPP teachers felt that the curriculum developed children's mathematics skills, but a minority of teachers felt that the curriculum did not sufficiently increase children's literacy skills, vocabularies, or understanding of how the world works. It is important to note that nearly all teachers thought that the mathematics and literacy lessons were too easy for many children in their classes, and only a small number felt that these lessons were too difficult.

10. Study Limitations

There were no significant limitations or issues in terms of carrying out this study. Attrition was minimal, and there were no issues identified that could compromise the quality or generalizability of the study results. Even so, we did find low take-up of the EYPP, with only about half of the children in the treatment communities attending the EYPP. This low take-up limited the internal validity of our analysis because the average treatment effect is likely biased based on noncompliance within the treatment group. Based on our data, we found that the households in the treatment group that did not comply with treatment (i.e., they sent their children to programs other than the EYPP) were more literate than those who took up treatment. To account for this differential take-up in our estimates, we present estimates of the ITT effect (the effect of being offered treatment) as well as the LATE effect (the effect of treatment on those who complied with treatment assignment).

11. Conclusions and Recommendations

This study was carried out very much according to plan. We had zero attrition at the school level and less than 3 percent attrition at the child and family levels. All study activities were completed on time, and we had no concerns about the quality or completeness of the study data.

Study Children and Families

Children in this study came from households that were able to meet their basic needs and support their learning, with nearly all households having electricity, books, and store-bought toys. Food insecurity rates were very low. Literacy rates were 84 percent for mothers and 65 percent for fathers.

Preschool Participation

In the control group, 58 percent of the children attended preschool. This figure tells us that even in the absence of the EYPP, slightly more than half of the children would go to preschool anyway. However, the EYPP seems to fill a gap among children who would not go to preschool otherwise. In the EYPP treatment group, only 10 percent of the children were not enrolled in preschool (versus 42 percent of the control group). So when the EYPP becomes available, 10 percent of the children still will not attend any preschool, 40 percent of the children will attend some other kind of preschool, 18 percent of the families who would have enrolled their children in other programming will switch to the EYPP, and 32 percent of the children will attend the EYPP who would have otherwise stayed home. We can conclude that the EYPP fills a gap and primarily serves children who would not have attended preschool otherwise.

Program Implementation

Program implementation seems to have gone well overall, with few issues. EYPP teachers were very positive about the program, believing that it was beneficial for children. They mostly felt that the curriculum was appropriate but did report that the curriculum was somewhat less effective at teaching vocabulary and how the world works, and some of the mathematics lessons were too easy for many of the children in their class. Children's attendance at the EYPP (among those enrolled) was very high. In terms of program improvements, teachers focused on working conditions, specifically the need for a higher honorarium and more ongoing training (monthly). Parents also were very positive about the EYPP, but parents in the treatment group whose children went to other programs rated those highly as well.

Impacts

We found that positive impacts on children's overall school readiness, beginning literacy, numeracy, and social and emotional development persisted from midline to endline. Thus, even after children in both the treatment and control groups have had access to the typical one-year government pre-primary class, the EYPP group still had significantly better learning in these areas. These intervention effects were significantly higher for girls than for boys at both timepoints (although boys also benefitted from the intervention). However, program effects on approaches to learning and motor development that were apparent at midline faded at endline (when the intervention and control groups showed similar levels of performance). The program's benefits seemed to come directly from participation of the children in preschool rather than from changing the household educational environment.

Recommendations

The EYPP was highly successful, so we have just three recommendations.

Scale up the EYPP programme in Bangladesh. The intervention showed lasting effects on overall school readiness, and children's development in the three key areas needed for primary education (literacy, mathematics, and social and emotional development). Both girls and boys benefitted from the intervention, with girls showing even higher intervention effects than boys. As noted in the introduction, the government policy states that children should receive 2 years of pre-primary education. The EYPP has proven to be an effective way to provide that second year.

Keep the existing programme structure and curriculum. The intervention typically makes use of existing pre-primary classrooms and teachers (with the EYPP implemented for a half day and regular government pre-primary for a half day), which will simplify scaling because there will be little need for new classrooms or teachers to do so. Teachers reported that they could implement the EYPP without any significant concerns, and had adequate resources to do so. Teachers did recommend improving a few of the lessons (for example, some were too easy for the children), and Save the Children should gain input from the experienced EYPP teachers to strengthen the curriculum where needed.

Professionalize and stabilize the role of EYPP teacher. EYPP teachers reported a few areas of concern about their jobs. First, the EYPP teacher position has been short-term, and teachers would prefer more predictability and stability when taking the job. In addition, the positions have been funded by a patchwork of contributions from Save the Children, the school and the community. So when the EYPP is expanded or scaled, it would be very beneficial to designate the EYPP teacher role as similar to the role of other teachers, with stable contracts and predictable pay (ideally through the government). The EYPP teachers also felt that they could benefit from ongoing (monthly) professional development support. Again, perhaps this could be provided through the same channels that the government uses to support primary school teachers (rather than outside providers, as was the case during this pilot).

In sum, the EYPP provides an effective approach to improving school readiness among Bangladesh's children, and it seems scalable within Bangladesh's existing education system. It fills a need for quality preschool programming and may (potentially) show an even larger benefit in more marginalized areas where families have fewer preschool options for their children.

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Appendix A. Sample and Group Assignment by Upazila and Union

Exhibit A1. Treatment Schools and Control Schools 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. Instruments

The tools from each round of data collection are in this appendix, except we cannot include the IDELA because of copyright restrictions.

Exhibit B1. Baseline Household Questionnaire

Baseline Household Questionnaire	Response Options	Code
Part 1: General Family Information		
1. What is your child's name?	(Open response)	NA
2. What is the sex of your child?	Girl	1
	Boy	2
3. Date of birth of child	Year	Open
	Month	Open
	Day	Open
4. How old is your child?	Years	Open
	Month	Open
5. What is your full name?	(Open response)	NA
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)?	(Open response)	NA
8. What is the mother's full name?	(Open response)	NA
9. What is the mother's age?	(Open response)	NA
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

Baseline Household Questionnaire	Response Options	Code
12. Can the mother write?	Yes	1
	No	0
	Don't Know	99
13. What is the father's full name?	(Open response)	NA
14. What is the father's age?	(Open response)	NA
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?	(Open response)	NA
19. Number of 7-10-year-old children in the family attending school?	(Open response)	NA
20. What is the number of 11-15-year-old children in the family?	(Open response)	NA
21. Number of 11-15-year-old children in the family attending school?	(Open response)	NA
Part 2: Home Environment / Parenting Practices		
22. Do you have any of the following types of other reading materials at home?		
a. Story/picture books for young children?	Yes	1
	No	0
	Don't know	99
If yes, how many books?		
b. Textbooks?	(Open response)	NA
c. Magazines?	(Open response)	NA
d. Newspapers?	(Open response)	NA
e. Religious books?	(Open response)	NA
f. Colouring books?	(Open response)	NA
g. Comics?	(Open response)	NA

Baseline Household Questionnaire	Response Options	Code
23. 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?	Yes	1
	No	0
	Don't know	99
b. Toys from a shop or manufactured toys?	Yes	1
	No	0
	Don't know	99
c. Household objects, such as bowls, cups or pots?	Yes	1
	No	0
	Don't know	99
d. Objects found outside, such as sticks, stones or leaves?	Yes	1
	No	0
	Don't know	99
e. Does your child have any drawing or writing materials?	Yes	1
	No	0
	Don't know	99
f. Does child have any puzzles (even a two-piece puzzle counts)?	Yes	1
	No	0
	Don't know	99
g. Does your child have any two or three-piece toys that require hand-eye coordination?	Yes	1
	No	0
	Don't know	99
h. Does child have toys that teach about colours, sizes or shapes?	Yes	1
	No	0
	Don't know	99
i. Does child have toys or games that help teach about numbers/counting?	Yes	1
	No	0
	Don't know	99
j. Others	(Open response)	NA

Baseline Household Questionnaire	Response Options	Code
24. 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		
a. Read books or look at picture books with child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
b. Tell stories to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
c. Sing songs to or with the child, including lullabies?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
d. Take the child outside the home? For example, to the market, visit relatives.	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
e. Play with the child any simple games?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
f. Name objects or draw things to or with the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4

Baseline Household Questionnaire	Response Options	Code
g. Show or teach your child something new, like teach a new word, or teach how to do something?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
h. Teach alphabet or encourage to learn letters to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
i. Play a counting game or teach numbers to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
j. Hug or show affection to your child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
k. Spank your child for misbehaving?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
l. Hit your child for misbehaving?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4

Baseline Household Questionnaire	Response Options	Code
m. Criticize or yell at your child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
25. 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?	(Open response)	NA
b. On a regular day, how many hours does the father spend time talking, walking, and/or playing with the child?	(Open response)	NA
c. On a regular day, how many hours the child spend in the care of another child who is less than 10 years old?	(Open response)	NA
d. On a regular day, how many hours does the child spend alone?	(Open response)	NA
PART 3: Socio-economic background		
26. How many rooms does your house have?	(Open response)	NA
27. Does your community have electricity?	Yes	1
	No	0
	Don't know	99
28. Does your household have electricity?	Yes	1
	No	2
	Don't know	99
29. 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

Baseline Household Questionnaire	Response Options	Code
30. 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
31. 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
32. What is the main source of drinking water for the household?	Supply (1)	1
	Tube well (2)	2
	Pond, river (3)	3
	Well (4)	4
	Waterfall, spring (5)	5
	Other (specify) (6)	6
Part 4: Food Security Scale		
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		
33. 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?	Almost every day	1
	Occasionally	2
	Once or twice	3
	Never	4
34. 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?	Almost every day	1
	Occasionally	2
	Once or twice	3
	Never	4
35. 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?	Almost every day	1
	Occasionally	2
	Once or twice	3
	Never	4

Baseline Household Questionnaire	Response Options	Code
Part 5: Monthly Expenditure		
Household Food Expenditure (in Taka)	(Open response)	NA
Household Education Expenditure (in Taka)	(Open response)	NA
Household Other Expenditure (in Taka)	(Open response)	NA
Part 6: Health Status		
36. 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
37. In the last 6 months, has [child name] received deworming?	Yes	1
	No	2
	Unsure	88
	Refused	99
38. In the past 2 weeks, has [child name] had diarrhoea, defined as loose stools more than 3 times per day?	Yes	1
	No	2
	Unsure	88
	Refused	99
39. In the past 2 weeks, has [child name] had cough or difficulty breathing?	Yes	1
	No	2
	Unsure	88
	Refused	99
40. 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	Open
	Unsure	88
	Refused	99
41. 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
	> 12 months ago or never	5
	Unsure	88
	Refused	99

Exhibit B1. School Observation

Baseline School Observation	Response Options	Code	Notes
Identification			
V1	Treatment	1	
	Control	2	
V2. Name of School	(Open response	NA	
V3. Name of Union	(Open response)	NA	
V4. Name of Interviewer	(Open response)	NA	
V5. Date of Interview	(Open response)	NA	
V6. Name of Upazila	(Open response)	NA	
Observation			
O1. Are the EYPP classroom and any outdoor play areas used by EYPP students safe?	Yes	1	No safety hazards present
	Partially	2	One or more minor safety hazards present that could injure a child but likely not seriously, such as broken glass, protruding nails, etc.
	No	3	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?	Yes	1	Roof is in good condition and children are fully protected from rain and sun while in class
	Partially	2	Some small holes in the roof but most of the classroom is projected (90% or more)
	No	3	More than 10% of the classroom roof is missing or damaged so that rain can come in
03. Does the EYPP classroom have electricity?	Always or almost always	1	
	Sometimes	2	
	Never	3	
04. Does the EYPP classroom have a working fan?	Always or almost always	1	
	Sometimes	2	
	Never	3	

Baseline School Observation	Response Options	Code	Notes
05. Do EYPP students have access to clean drinking water at school?	Always or almost always	1	
	Sometimes	2	Water is present but not all children have access
	Never	3	If children only have access to water from home, check "never"
06. Are there functioning latrines within a five-minute walk of the EYPP classroom?	Yes, and sanitary	1	Latrine slab or walls are free from faeces or urine, no bad smell, no garbage, no bad smell
	Yes, but unsanitary	2	Faeces or urine on the latrine slab or walls, a bad smell, and/or garbage
	No	3	
Does the EYPP classroom have…			
07. Books?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
08. Puzzles?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
09. Blocks or other building toys?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
010. Puppets or dolls?	Yes	1	
	No	2	
011. Pretend play materials? (Toy animals, food, cars, etc.)	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
012. Art supplies?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
013. Posters, cards, small objects, or other materials that teach about numbers or mathematics?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable
014. Posters, cards or other materials that teach vocabulary and/or literacy?	Yes	1	Present and usable
	No	2	Not present, broken, or otherwise unusable

Community Questionnaire

Baseline Community Questionnaire	Response Options	Code
Community Identification		
V001. Area	Treatment	1
	Control	2
V002. School ID	(Open response)	NA
V003. Union	(Open response)	NA
V004. Upazila	(Open response)	NA
V005. Name of Interviewer	(Open response)	NA
V006. Date of Interview	(Open response)	NA
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	(Open response)	NA
A002. Name of the respondent	(Open response)	NA
A003. Age	(Open response)	NA
A004. Gender	Male	1
	Female	2
A005. Role	School Head	1
	Senior Teacher	2
	Other (specify)	3
A006. How many years have you been living in this village?	(Open response)	NA
A007. For how long [in years] you have been head (or senior teacher) of this school?	(Open response)	NA
A008. Mobile number	(Open response)	NA
B. Basic Infrastructure of the Community		
B001. What is the main access route to this village/mohalla?	All weather road/ pacca road/motor able	1
	Seasonal road/earthen	2
	Waterway	3
	Path	4
	5= Other	5
B002. Is electricity available here?	Yes	1
	No	2

Baseline Community Questionnaire	Response Options	Code
B003. How many hours per day on average is there electricity?	(Open response)	NA
B004. Is there mobile service?	Yes	1
	No	2
B005. Is there internet access within the community?	Yes	1
	No	2
C. Community Assets		
C001. District Hospital		
How far in km is the district hospital located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the district hospital using the most common type of transportation?	(Open response)	NA
Mode of transportation to the district hospital	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the district hospital	Satisfactory	1
	Average	2
	Not Satisfactory	3
C002 Upazila Health Complex		
How far in km is the upazila health complex located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the upazila health complex using the most common type of transportation?	(Open response)	NA
Mode of transportation to the upazila health complex	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the upazila health complex	Satisfactory	1
	Average	2
	Not Satisfactory	3

Baseline Community Questionnaire	Response Options	Code
C003. Community Clinic		
How far in km is the community clinic located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the community clinic using the most common type of transportation?	(Open response)	NA
Mode of transportation to the community clinic	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the community clinic	Satisfactory	1
	Average	2
	Not Satisfactory	3
C004. Private clinic		
How far in km is the private clinic located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the private clinic using the most common type of transportation?	(Open response)	NA
Mode of transportation to the private clinic	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the private clinic	Satisfactory	1
	Average	2
	Not Satisfactory	3
C005. NGO clinic		
How far in km is the NGO clinic located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the NGO clinic using the most common type of transportation?	(Open response)	NA
Mode of transportation to the NGO clinic	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5

Baseline Community Questionnaire	Response Options	Code
Quality of services at the NGO clinic	Satisfactory	1
	Average	2
	Not Satisfactory	3
C006. Union Council		
How far in km is the union council located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the union council using the most common type of transportation?	(Open response)	NA
Mode of transportation to the union council	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the union council	Satisfactory	1
	Average	2
	Not Satisfactory	3
C007. Islamic school		
How far in km is the Islamic school located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the Islamic school using the most common type of transportation?	(Open response)	NA
Mode of transportation to the Islamic school	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the Islamic school	Satisfactory	1
	Average	2
	Not Satisfactory	3
C008. Government High school		
How far in km is the government high school located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the government high school using the most common type of transportation?	(Open response)	NA

Baseline Community Questionnaire	Response Options	Code
Mode of transportation to the government high school	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the government high school	Satisfactory	1
	Average	2
	Not Satisfactory	3
C009. Non-Government High school		
How far in km is the Non-Government high school located from the Preschool centre?	(Open response)	NA
How many minutes does it take to go to the Non-Government high school using the most common type of transportation?	(Open response)	NA
Mode of transportation to the Non-Government high school	Walking	1
	Rickshaw/van	2
	Boat	3
	Auto-rickshaw	4
	Bicycle	5
Quality of services at the Non-Government high school	Satisfactory	1
	Average	2
	Not Satisfactory	3

D. Current project sat this school targeting Children (3-6 years)				
Project		Code	Name of Organization	Legal Status
D001. School feeding or nutrition support	Yes	1		
	No	2		
D002. WASH Program	Yes	1		
	No	2		
D003. Provision of school supplies to households that cannot afford them (or to all households)	Yes	1		
	No	2		
D004. Other (specify)	Yes	1		
	No	2		
D005. Other (specify)	Yes	1		
	No	2		

Exhibit B3. Midline Household Questionnaire

Midline Household Questionnaire	Response Options	Code
Part 1: General Family Information		
1. What is your child's name?	(Open response)	NA
2. What is your full name?	(Open response)	NA
3. How are you related to the child?	Mother	1
	Father	2
	Grandparent	3
	Older brother/sister	4
	Other caregiver	5
	Specify	5A
4. What is the number of 7-10-year-old children in the family?	(Open response)	NA
5. How many of the 7-10-year-old children in the family are attending school?	(Open response)	NA
6. What is the number of 11-15-year-old children in the family?	(Open response)	NA
7. How many of the 7-10-year-old children in the family are attending school?	(Open response)	NA
PART 2: Home Environment / Parenting Practices		
8. Do you have any of the following types of other reading materials at home?	Yes	1
	No	0
	Don't know	99
If yes, how many books?		Open
a. Story/picture books for young children?	(Open response)	NA
b. Textbooks?	(Open response)	NA
c. Magazines?	(Open response)	NA
d. Newspapers?	(Open response)	NA
e. Religious books?	(Open response)	NA
f. Colouring books?	(Open response)	NA
g. Comics?	(Open response)	NA
9. 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?	Yes	1
	No	0
b. Toys from a shop or manufactured toys?	Yes	1
	No	0

Midline Household Questionnaire	Response Options	Code
c. Household objects, such as bowls, cups or pots?	Yes	1
	No	0
d. Objects found outside, such as sticks, stones or leaves?	Yes	1
	No	0
e. Does your child have any drawing or writing materials?	Yes	1
	No	0
f. Does child have any puzzles (even a two-piece puzzle counts)?	Yes	1
	No	0
g. Does your child have any two- or three-piece toys that require hand-eye coordination?	Yes	1
	No	0
h. Does child have toys that teach about colours, sizes or shapes?	Yes	1
	No	0
i. Does child have toys or games that help teach about numbers/counting?	Yes	1
	No	0
j. Others	Yes	1
	No	0
10. 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		
a. Read books or look at picture books with child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
b. Tell stories to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
c. Sing songs to or with the child, including lullabies?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4

Midline Household Questionnaire	Response Options	Code
d. Take the child outside the home? For example, to the market, visit relatives.	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
e. Play with the child any simple games?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
f. Name objects or draw things to or with the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
g. Show or teach your child something new, like teach a new word, or teach how to do something?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
h. Teach alphabet or encourage to learn letters to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
i. Play a counting game or teach numbers to the child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4

Midline Household Questionnaire	Response Options	Code
j. Hug or show affection to your child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
k. Spank your child for misbehaving?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
l. Hit your child for misbehaving?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
m. Criticize or yell at your child?	Yes	1
	No	0
	Mother	2
	Father	3
	Other caregiver	4
11. 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?	(Open response)	NA
b. On a regular day, how many hours does the father spend time talking, walking, and/or playing with the child?	(Open response)	NA
c. On a regular day, how many hours the child spend in the care of another child who is less than 10 years old?	(Open response)	NA
d. On a regular day, how many hours does the child spend alone?	(Open response)	NA

Midline Household Questionnaire	Response Options	Code
Part 3: Health Status		
12. 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
13. In the last 6 months, has [child name] received deworming?	Yes	1
	No	2
	Unsure	88
	Refused	99
14. In the past 2 weeks, has [child name] had diarrhoea, defined as loose stools more than 3 times per day?	Yes	1
	No	2
	Unsure	88
	Refused	99
15. In the past 2 weeks, has [child name] had cough or difficulty breathing?	Yes	1
	No	2
	Unsure	88
	Refused	99
16. 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
	> 12 months ago or never weighed	5
	Unsure	88
	Refused	99
Part 4: Child's Preschool Education		
17. Did you enrol your child in any preschool program in 2018?	Yes → continue to Q18	1
	No → continue to Q33	0

Midline Household Questionnaire	Response Options	Code
18. If yes, which type of preschool program?	Public preschool	1
	Private preschool	2
	BRAC preschool	3
	Madrasa/Islamic preschool	4
	Other preschool	5
	Unsure	88
	Refused	99
19. On average, how many days per week did your child addend this preschool?	One	1
	Two	2
	Three	3
	Four	4
	Five or More	5
	Unsure	88
	Refused	99
20. Was this preschool programme a full day programme (morning and afternoon), or a half day programme (only morning or only afternoon)?	Full day	1
	Half Day	2
	Refused	99
	Unsure	88
21. How confident were you in your abilities to prepare your child for preschool?	Not at all confident	1
	A little confident	2
	Somewhat confident	3
	Very confident	4
I would now like to read you some statements about your child's preschool, and I want you to tell me whether you think each is not at all true, a little bit true, mostly true, or very true in your opinion. All the answers you provide will be kept confidential. This means that no one at your child's school will know what you tell me here.		
22. The school was a good place for my child to be.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
23. The school did a good job preparing children for their futures.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4

Midline Household Questionnaire	Response Options	Code
24. Going to school exposed my child to harmful people or ideas.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
25. The school met my child's academic needs.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
26. The school met my child's social and behavioural needs.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
27. Doing well in preschool will improve my child's chances of having a good life when he/she grows up	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
28. This preschool kept me informed about my child's performance and behaviour.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
29. I like the teacher(s) at the preschool.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
30. I feel comfortable talking with my child's preschool teacher.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
31. The preschool is a welcoming place for families like mine.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4

Midline Household Questionnaire	Response Options	Code
32. The preschool is a safe place for my child.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
33. Why didn't you send your child to preschool in 2018?	He/she was too young	1
	There was no preschool in my area	2
	My family didn't like the preschool(s) in my area	3
	There were not enough spaces in the preschool(s) in my area	4
	Other	8
	Unsure	88
	Refused	99
Thank you for taking the time to speak with me today.		

Exhibit B4. EYPP Teacher Questionnaire (Midline)

EYPP Teacher Questionnaire	Response Options	Code
PART 1: Perceptions of the Early Years Preschool Programme		
I am going to read ten statements about the Early Years Preschool Programme. For each, please tell me if you feel that this statement is not at all true, a little bit true, mostly true, or very true. Again, there are no right or wrong answers to these questions.		
1. The programme is necessary for children in this community	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
2. The programme builds children's early mathematics skills well.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
3. The programme builds children's early literacy skills well.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
4. The programme builds children's vocabularies.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
5. The programme builds children's understanding of how the world works.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
6. The programme builds children's social skills with their peers.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99

EYPP Teacher Questionnaire	Response Options	Code
7. The programme builds children's ability to behave well in a classroom.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
8. The children enjoy attending the programme.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
PART 2: Teaching the Early Years Preschool Programme		
Now I would like to ask you about your experiences teaching the Early Years Preschool Programme. Again, I am not here to judge you as a teacher, but rather to learn how well the programme works and where it could be improved.		
9. I have received adequate training and/or coaching to be able to teach the programme well.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
10. The instructions for teachers are clear, so I know how to deliver activities in the curriculum.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
11. I have the materials I need to deliver the activities in the curriculum.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
12. I am able to maintain control of my class while carrying out the curriculum.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99

EYPP Teacher Questionnaire	Response Options	Code
13. Sometimes children find the programme activities boring.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
14. The curriculum activities to teach mathematics are too easy for many children in my class.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
15. The curriculum activities to teach mathematics are too difficult for many children in my class.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
16. The curriculum activities to teach literacy are too easy for many children in my class.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
17. The curriculum activities to teach literacy are too difficult for many children in my class.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
18. I am able to meet the learning needs of all of the children in my class.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
	Don't know	99
PART 3: Recommendations		
19. Based on your experiences, what are the three best things about the programme?	(Open response)	NA
20. Based on your experiences, what three things most need to be improved about the curriculum?	(Open response)	NA

EYPP Teacher Questionnaire	Response Options	Code
21. Based on your experiences, are there any things that should be improved about the training or support teachers receive to deliver the programme?	Yes	1
	No	0
22. If yes, what should be improved? [If more than three, note only top three]	(Open response)	NA

Exhibit B5. Endline Household Questionnaire

Endline Household Questionnaire	Response Options	Code
Part 1: General Family Information		
1. What is your child's name?	(Open response)	NA
2. What is your full name?	(Open response)	NA
3. How are you related to the child?	Mother	1
	Father	2
	Grandparent	3
	Older brother/sister	4
	Other caregiver	5
	Specify	Open
Part 2: Home Environment / Parenting practices		
4. Does your child read books other than textbooks?	Yes	1
	No	0
	Don't know	99
I am interested in learning about the things that your child plays with when s/he is at home. Does s/he play with:		
5. Does your child have any drawing or writing materials?	Yes	1
	No	0
	Don't know	99
6. Does child have any puzzles (even a two-piece puzzle counts)?	Yes	1
	No	0
	Don't know	99
7. Does your child have any two- or three-piece toys that require hand-eye coordination?	Yes	1
	No	0
	Don't know	99
8. Does child have toys that teach about colours, sizes or shapes?	Yes	1
	No	0
	Don't know	99
9. Does child have toys or games that help teach about numbers/counting?	Yes	1
	No	0
	Don't know	99

Endline Household Questionnaire	Response Options	Code
10. Read books or look at picture books with child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
11. Tell stories to the child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
12. Sing songs to or with the child, including lullabies?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
13. Take the child outside the home? For example, to the market, visit relatives.	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
14. Play with the child any simple games?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
15. Name objects or draw things to or with the child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
16. Show or teach your child something new, like teach a new word, or teach how to do something?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
17. Teach alphabet or encourage to learn letters to the child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3

Endline Household Questionnaire	Response Options	Code
18. Play a counting game or teach numbers to the child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
19. Hug or show affection to your child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
20. Spank your child for misbehaving?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
21. Hit your child for misbehaving?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
22. Criticize or yell at your child?	No	0
	Yes, by Mother	1
	Yes, by Father	2
	Yes, by Caregiver	3
I would like to know about how your child spends his/her day.		
23. On a regular day, how many hours does the mother spend time talking, walking, and/or playing with the child?	(Open response)	NA
24. On a regular day, how many hours does the father spend time talking, walking, and/or playing with the child?	(Open response)	NA
25. On a regular day, how many hours the child spend in the care of another child who is less than 10 years old?	(Open response)	NA
26. On a regular day, how many hours does the child spend alone?	(Open response)	NA

Endline Household Questionnaire	Response Options	Code
Part 3: Health Status		
27. 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
28. In the last 6 months, has [child name] received deworming?	Yes	1
	No	2
	Unsure	88
	Refused	99
29. In the past 2 weeks, has [child name] had diarrhoea, defined as loose stools more than 3 times per day?	Yes	1
	No	2
	Unsure	88
	Refused	99
30. In the past 2 weeks, has [child name] had cough or difficulty breathing?	Yes	1
	No	2
	Unsure	88
	Refused	99
31. If yes above, did this illness require [child name] medical care from a clinic, hospital, doctor's chamber?	Yes	1
	No	2
	Unsure	88
	Refused	99
32. In the past 2 weeks, has [child name] had an illness other than cough, difficulty breathing that required medical care from a clinic, hospital, doctor's chamber?	Yes	1
	No	2
	Unsure	88
	Refused	99

Endline Household Questionnaire	Response Options	Code
33. 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
Part 4: Child's Education		
Did you enrol your child in any preschool program last year (in 2018)?	Yes, continue to Q35	1
	No, continue to Q45	2
35. Which type of preschool program?	Public preschool	1
	Private preschool	2
	BRAC preschool	3
	Madrasa/Islamic preschool	4
	Other preschool(please specify _____)	8
	Unsure	88
	Refused	99
36. What was the main reason you selected this preschool?	Close to home	1
	Safe commuting	2
	Low or no cost	3
	Convenient hours of operation	4
	Good quality of education	5
	Would teach my child Islamic values	6
	Influence of community leaders	7
	Other (specify)	8
	Unsure	88
	Refused	99

Endline Household Questionnaire	Response Options	Code
I would now like to read you some statements about your child's school, and I want you to tell me whether you think each is not at all true, a little bit true, mostly true, or very true in your opinion. All the answers you provide will be kept confidential. This means that no one at your child's school will know what you tell me here.		
40. The school was a good place for my child to be	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
41. The school did a good job preparing children for their futures.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
42. Going to school exposed my child to harmful people or ideas.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
43. The school met my child's academic needs.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
44. The school met my child's social and behavioural needs.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
45. Doing well in school will improve my child's chances of having a good life when he/she grows up.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4

Endline Household Questionnaire	Response Options	Code
46. This school kept me informed about my child's performance and behaviour.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
47. I like the teacher(s) at the school.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
48. I feel comfortable talking with my child's teacher.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
49. The school is a welcoming place for families like mine	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
50. The school is a safe place for my child.	Not at all true	1
	A little bit true	2
	Mostly true	3
	Very true	4
I would like to ask you about how much your family paid for your child's education in 2019. Please do include money contributed by family members who may not live in your home. Do not include money spent on education for any other children. Your best estimates are fine.		
51. Direct payments to school (school fees)	(Open response)	NA
52. Other activity fees	(Open response)	NA
53. School uniforms	(Open response)	NA
54. School supplies such as a backpack, notebooks, pencils, and so on	(Open response)	NA

Endline Household Questionnaire	Response Options	Code
55. Snacks or meals your child must bring to school	(Open response)	NA
56. Transportation to bring your child to school	(Open response)	NA
56. Private tutoring	(Open response)	NA
58. Other costs	(Open response)	NA
59. Why didn't you send your child to school in 2019?	He/she was too young	1
	He/she was ill	2
	He/she had a disability	3
	My family didn't like the school(s) in my area	4
	There were not enough spaces in the school(s) in my area	5
	Other (Specify)	8
	Unsure	88
	Refused	99
I would like to ask you about how much your family paid for your child's pre-school education last year, in 2018. Please do include money contributed by family members who may not live in your home. Do not include money spent on education for any other children. Your best estimates are fine.		
60. Direct payments to school (school fees)	(Open response)	NA
61. Other activity fees	(Open response)	NA
62. School uniforms	(Open response)	NA
63. School supplies such as a backpack, notebooks, pencils, and so on	(Open response)	NA
64. Snacks or meals your child must bring to school	(Open response)	NA
65. Transportation to bring your child to school	(Open response)	NA
66. Private tutoring	(Open response)	NA
67. Other costs	(Open response)	NA

Appendix C. IDELA Scoring by Domain and Subtask

Exhibit C1. Total Possible IDELA Points by Domain and Subtask

Domain	Subskill	Total possible points
Panel A. Emergent Literacy		
	Print awareness	3
	Expressive vocabulary	20
	Letter identification	20
	Emergent writing	4
	Phonemic awareness	3
	Listening comprehension	5
	Total	55
Panel B. Emergent Numeracy		
	Measurement and comparison	4
	Classification and sorting	2
	Number identification	20
	Shape identification	5
	One-to-one correspondence	3
	Addition and subtraction	3
	Simple problem solving (puzzle)	6
	Total	43
Panel C. Executive Function		
	Short-term memory	4
	Inhibitory control	6
	Total	10
Panel D. Approaches to Learning		
	Concentration and motivation	6
	Total	12
Panel E. Social-Emotional Development		
	Peer relationships	10
	Emotional awareness & regulation	4
	Empathy	3
	Self-awareness	6
	Conflict resolution	2
	Total	25
Panel F. Motor Development		
	Hopping on one foot	10
	Copying a shape	4
	Drawing a human figure	8
	Folding paper	4
	Total	26

Appendix D. Impacts on IDELA Domain Scores

Exhibit D1. Impacts on IDELA Domain Score Points for the Full Sample

	ITT analysis				LATE analysis				Baseline mean		
	Midline		Endline		Midline		Endline		Treatment	Control	*N*
	Points	ES	Points	ES	Points	ES	Points	ES			
Dependent variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
Emergent literacy	6.42*** (1.63)	0.25*** (0.07)	4.76*** (1.509)	0.23*** (0.08)	12.69*** (3.28)	0.48*** (0.14)	9.40*** (2.87)	0.44*** (0.14)	29.21	28.65	1,801
Emergent numeracy	5.71*** (1.69)	0.29*** (0.09)	5.33*** (1.66)	0.30*** (0.10)	11.28*** (3.43)	0.57*** (0.19)	10.54*** (3.26)	0.60*** (0.19)	35.45	34.58	1,801
Executive function	2.67 (2.81)	0.10 (0.09)	-0.84 (2.41)	0.02 (0.08)	5.28 (5.54)	0.20 (0.19)	-1.66 (4.73)	0.03 (0.16)	50.50	48.05	1,801
Approaches to learning	6.58*** (2.39)	0.26*** (0.09)	0.47 (2.03)	0.05 (0.08)	13.01*** (4.79)	0.51*** (0.18)	0.94 (3.99)	0.09 (0.15)	55.91	55.02	1,801
Social-emotional learning	8.83*** (1.71)	0.37*** (0.08)	7.96*** (1.91)	0.34*** (0.10)	17.46*** (3.30)	0.72*** (0.16)	15.73*** (3.75)	0.67*** (0.19)	32.00	30.29	1,801
Motor development	7.41*** (1.82)	0.28*** (0.07)	0.75 (1.78)	0.08 (0.08)	14.64*** (3.57)	0.55*** (0.13)	1.49 (3.49)	0.16 (0.15)	43.02	41.65	1,801

Note. All estimates use ANCOVA techniques with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable. ES = effect size; ITT = intent-to-treat; LATE = local average treatment effect.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit D2. Impacts on EGRA and EGMA Domain Score Points for the Full Sample

	ITT Analysis		LATE Analysis		Endline Mean		N
	Points	ES	Points	ES	T	C	
Δ Dependent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
EGRA – Familiar Words	-1.03	-0.03	-2.03	-0.05	40.86	41.89	1,801
	(2.97)	(0.07)	(5.83)	(0.14)			
EGMA – Numeral Identification	1.08	0.05	2.13	0.10	28.74	24.66	1,801
	(1.52)	(0.07)	(2.99)	(0.14)			
EGMA – Number Discrimination	2.92	0.11	5.78	0.23	55.15	52.22	1,801
	(1.93)	(0.08)	(3.76)	(0.15)			
EGMA – Missing Numbers	-1.69	-0.09	-6.14	-0.34	58.00	59.69	72
	(3.64)	(0.20)	(13.33)	(0.74)			

Note: All estimates use ordinary least squares regression with endline observations only controlling for treatment. Robust standard errors clustered at the school level are in parentheses. ES = effect size; ITT = intent-to-treat; LATE = local average treatment effect.

*p < .10. **p < .05. ***p < .01.

Appendix E. LATE Analysis First Stage Regression Results

Exhibit E1. LATE Analysis First Stage Regression Results

Instrumental variable	EYPP	EYPP * Midline	EYPP * Endline
Treat	0.506 (0.028)***	0.000 (0.000)	0.000
Midline		0.001 (0.001)	
Endline			0.001 (0.001)
Treat * Midline		0.506 (0.028)***	
Treat * Endline			0.506 (0.028)***
Constant	0.001 (0.001)	-0.000	-0.000 (0.000)
R^2	0.32	0.46	0.46
F-stat	334.87	112.63	112.63
N	1,801	1,801	1,801

Note. All estimates use linear regression with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*p < .10. **p < .05. ***p < .01.

Appendix F. Full Regression Results

Exhibit F1. ANCOVA Estimates of Effect of EYPP on IDELA Scores

	Approaches to learning	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function
Treat * Midline	6.583 (2.385)***	7.405 (1.824)***	6.423 (1.630)***	5.708 (1.693)***	8.833 (1.714)***	2.670 (2.811)
Treat * Endline	0.473 (2.027)	0.751 (1.780)	4.755 (1.509)***	5.334 (1.661)***	7.957 (1.907)***	-0.842 (2.406)
Midline	18.760 (1.893)***	23.019 (1.294)***	23.095 (1.187)***	18.333 (1.213)***	15.348 (1.096)***	17.921 (1.982)***
Endline	35.676 (1.604)***	46.205 (1.278)***	49.280 (1.019)***	38.777 (1.138)***	36.339 (1.336)***	36.603 (1.488)***
Treat	0.573 (1.152)	0.708 (0.789)	0.266 (0.440)	0.421 (0.613)	0.854 (0.590)	1.444 (1.351)
Baseline approaches to learning	0.505 (0.012)***					
Baseline motor development		0.554 (0.011)***				
Baseline emergent literacy			0.717 (0.019)***			
Baseline emergent numeracy				0.618 (0.020)***		
Baseline social-emotional learning					0.574 (0.016)***	
Baseline executive functioning						0.465 (0.011)***
Constant	26.969 (1.119)***	18.404 (0.788)***	7.930 (0.637)***	13.066 (0.844)***	12.778 (0.648)***	25.423 (1.012)***
R^2	0.52	0.63	0.69	0.67	0.56	0.47
N	1,801	1,801	1,801	1,801	1,801	1,801

Note. All estimates use ANCOVA techniques with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F2. ANCOVA Estimates of Effect of EYPP on IDELA Scores in *z*-Scores

	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function	Approaches to learning
Treat * Midline	0.279 (0.067)***	0.245 (0.072)***	0.289 (0.092)***	0.365 (0.082)***	0.103 (0.094)	0.257 (0.087)***
Treat * Endline	0.078 (0.076)	0.225 (0.076)***	0.304 (0.095)***	0.342 (0.095)***	0.017 (0.082)	0.045 (0.078)
Midline	-0.146 (0.048)***	-0.117 (0.049)**	-0.145 (0.065)**	-0.190 (0.051)***	-0.043 (0.067)	-0.129 (0.069)*
Endline	-0.034 (0.054)	-0.101 (0.050)**	-0.146 (0.065)**	-0.176 (0.066)***	0.005 (0.051)	-0.012 (0.062)
Treat	0.023 (0.026)	0.017 (0.028)	0.025 (0.036)	0.052 (0.036)	0.043 (0.040)	0.018 (0.037)
Baseline motor development	0.603 (0.014)***					
Baseline emergent literacy		0.654 (0.016)***				
Baseline emergent numeracy			0.602 (0.019)***			
Baseline social-emotional learning				0.529 (0.013)***		
Baseline executive functioning					0.507 (0.014)***	
Baseline approaches to learning						0.549 (0.015)***
Constant	-0.016 (0.020)	-0.016 (0.020)	-0.020 (0.024)	-0.031 (0.025)	-0.030 (0.026)	-0.015 (0.028)
R^2	0.37	0.43	0.38	0.31	0.26	0.31
N	1,801	1,801	1,801	1,801	1,801	1,801

Note. All estimates use ANCOVA techniques with panel observations. Coefficients are presented as *z*-scores. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F3. LATE Estimates of Effect of EYPP on IDELA Scores

	Approaches to learning	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function
EYPP	1.125 (2.237)	1.367 (1.524)	0.493 (0.815)	0.809 (1.173)	1.618 (1.114)	2.833 (2.639)
EYPP * Midline	13.009 (4.791)***	14.635 (3.570)***	12.693 (3.284)***	11.281 (3.430)***	17.456 (3.301)***	5.279 (5.535)
EYPP * Endline	0.936 (3.988)	1.486 (3.489)	9.397 (2.874)***	10.541 (3.262)***	15.725 (3.752)***	-1.660 (4.727)
Midline	18.744 (1.887)***	23.001 (1.287)***	23.079 (1.181)***	18.319 (1.208)***	15.327 (1.090)***	17.914 (1.975)***
Endline	35.674 (1.599)***	46.202 (1.274)***	49.268 (1.014)***	38.764 (1.133)***	36.320 (1.328)***	36.605 (1.483)***
Baseline approaches to learning	0.508 (0.012)***					
Baseline motor development		0.564 (0.012)***				
Baseline emergent literacy			0.734 (0.021)***			
Baseline emergent numeracy				0.628 (0.023)***		
Baseline social-emotional learning					0.591 (0.018)***	
Baseline executive functioning						0.468 (0.011)***
Constant	26.805 (1.106)***	18.012 (0.804)***	7.451 (0.685)***	12.708 (0.942)***	12.272 (0.688)***	25.266 (1.006)***
R^2 *N*	0.51 1,801	0.63 1,801	0.69 1,801	0.66 1,801	0.57 1,801	0.47 1,801

Note. All estimates use ANCOVA techniques with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F4. LATE Estimates of Effect of EYPP on IDELA Scores in *z*-Scores

	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function	Approaches to learning
EYPP	0.044 (0.049)	0.032 (0.052)	0.048 (0.069)	0.099 (0.068)	0.084 (0.079)	0.036 (0.072)
EYPP *Midline	0.551 (0.132)***	0.484 (0.144)***	0.572 (0.187)***	0.722 (0.158)***	0.203 (0.185)	0.508 (0.175)***
EYPP * Endline	0.155 (0.149)	0.444 (0.144)***	0.601 (0.186)***	0.676 (0.188)***	0.034 (0.161)	0.088 (0.153)
Midline	-0.147 (0.048)***	-0.118 (0.049)**	-0.145 (0.064)**	-0.191 (0.051)***	-0.043 (0.067)	-0.130 (0.069)*
Endline	-0.034 (0.054)	-0.102 (0.050)**	-0.147 (0.064)**	-0.177 (0.066)***	0.005 (0.051)	-0.012 (0.061)
Baseline approaches to learning	0.614 (0.015)***					
Baseline motor development		0.668 (0.017)***				
Baseline emergent literacy			0.612 (0.022)***			
Baseline emergent numeracy				0.543 (0.015)***		
Baseline social-emotional learning					0.511 (0.014)***	
Baseline executive functioning						0.552 (0.015)***
Constant	-0.015 (0.019)	-0.015 (0.020)	-0.019 (0.023)	-0.030 (0.024)	-0.029 (0.026)	-0.015 (0.028)
R^2	0.37	0.43	0.37	0.33	0.26	0.30
N	1,801	1,801	1,801	1,801	1,801	1,801

Note. All estimates use ANCOVA techniques with panel observations. Coefficients are presented as *z*-scores. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F5. ANCOVA Estimates of Effect of EYPP on IDELA Scores by Gender

	Approaches to learning	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function
Treat * Midline	8.531 (2.457)***	8.807 (1.964)***	8.439 (1.729)***	7.373 (1.680)***	10.038 (1.872)***	3.801 (2.817)
Male	1.072 (0.535)**	-0.540 (0.535)	-0.672 (0.554)	0.616 (0.485)	0.105 (0.537)	0.142 (0.544)
Treat * Midline * Male	-3.700 (1.524)**	-2.660 (1.472)*	-3.825 (1.346)***	-3.160 (1.054)***	-2.286 (1.637)	-2.147 (1.666)
Treat * Endline	1.886 (2.122)	0.833 (1.944)	6.261 (1.712)***	7.377 (1.749)***	8.820 (2.105)***	-0.792 (2.440)
Treat * Endline * Male	-2.684 (1.585)*	-0.155 (1.279)	-2.857 (1.301)**	-3.878 (1.151)***	-1.638 (1.705)	-0.095 (1.431)
Midline	18.761 (1.893)***	23.019 (1.295)***	23.094 (1.187)***	18.333 (1.213)***	15.348 (1.097)***	17.921 (1.982)***
Endline	35.676 (1.605)***	46.204 (1.279)***	49.279 (1.019)***	38.777 (1.138)***	36.339 (1.336)***	36.603 (1.488)***
Treat	0.544 (1.150)	0.725 (0.793)	0.285 (0.444)	0.403 (0.610)	0.852 (0.591)	1.441 (1.351)
Baseline approaches to learning	0.506 (0.012)***					
Baseline motor development		0.553 (0.011)***				
Baseline emergent literacy			0.716 (0.018)***			
Baseline emergent numeracy				0.619 (0.019)***		
Baseline social-emotional learning					0.573 (0.016)***	
Baseline executive functioning						0.465 (0.011)***
Constant	26.387 (1.127)***	18.743 (0.844)***	8.309 (0.700)***	12.714 (0.873)***	12.750 (0.704)***	25.355 (1.019)***
R^2 *N*	0.520 1,801	0.64 1,801	0.70 1,801	0.67 1,801	0.56 1,801	0.47 1,801

Note. All estimates use ANCOVA techniques with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F6. ANCOVA Estimates of Effect of EYPP on IDELA Scores by Gender in *z*-Scores

	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function	Approaches to learning
Treat * Midline	0.329 (0.073)***	0.320 (0.076)***	0.378 (0.092)***	0.413 (0.089)***	0.145 (0.095)	0.334 (0.090)***
Male	-0.019 (0.024)	-0.031 (0.025)	0.034 (0.027)	0.002 (0.025)	0.009 (0.022)	0.046 (0.022)**
Treat * Midline * Male	-0.095 (0.057)*	-0.143 (0.056)**	-0.169 (0.056)***	-0.091 (0.074)	-0.080 (0.059)	-0.146 (0.059)**
Treat * Endline	0.117 (0.084)	0.298 (0.085)***	0.420 (0.099)***	0.377 (0.103)***	0.028 (0.087)	0.107 (0.086)
Treat * Endline * Male	-0.073 (0.066)	-0.139 (0.062)**	-0.219 (0.065)***	-0.066 (0.078)	-0.021 (0.064)	-0.118 (0.076)
Midline	-0.146 (0.048)***	-0.117 (0.049)**	-0.145 (0.065)**	-0.190 (0.051)***	-0.043 (0.067)	-0.129 (0.069)*
Endline	-0.034 (0.054)	-0.101 (0.050)**	-0.146 (0.065)**	-0.176 (0.066)***	0.005 (0.051)	-0.012 (0.062)
Treat	0.023 (0.026)	0.018 (0.028)	0.024 (0.036)	0.052 (0.036)	0.043 (0.040)	0.017 (0.037)
Baseline approaches to learning	0.601 (0.014)***					
Baseline motor development		0.652 (0.016)***				
Baseline emergent literacy			0.604 (0.018)***			
Baseline emergent numeracy				0.529 (0.013)***		
Baseline social-emotional learning					0.507 (0.014)***	
Baseline executive functioning						0.550 (0.015)***
Constant	-0.006 (0.023)	-0.001 (0.024)	-0.037 (0.028)	-0.032 (0.028)	-0.034 (0.027)	-0.038 (0.030)
R^2	0.37	0.43	0.38	0.32	0.26	0.31
N	1,801	1,801	1,801	1,801	1,801	1,801

Note. All estimates use ANCOVA techniques with panel observations. Coefficients are presented as z-scores. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*$p < .10$. **$p < .05$. ***$p < .01$.

Exhibit F7. LATE Estimates of Effect of EYPP on IDELA Scores by Gender

	Approaches to learning	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function
EYPP	1.124 (2.234)	1.371 (1.527)	0.492 (0.812)	0.805 (1.167)	1.619 (1.114)	2.835 (2.640)
EYPP * Midline	15.264 (4.700)***	17.360 (3.599)***	16.832 (3.211)***	13.519 (3.271)***	19.089 (3.454)***	7.066 (5.397)
EYPP * Endline	2.506 (4.045)	2.056 (3.605)	12.653 (2.963)***	13.523 (3.236)***	16.753 (3.852)***	-1.745 (4.648)
EYPP * Midline * Male	-4.403 (2.582)*	-5.322 (2.517)**	-8.082 (2.353)***	-4.369 (1.715)**	-3.188 (2.997)	-3.491 (2.947)
EYPP * Endline * Male	-3.066 (2.752)	-1.114 (2.131)	-6.358 (2.187)***	-5.822 (1.813)***	-2.007 (3.086)	0.165 (2.293)
Midline	18.747 (1.887)***	23.004 (1.288)***	23.084 (1.182)***	18.322 (1.208)***	15.329 (1.090)***	17.916 (1.975)***
Endline	35.676 (1.599)***	46.203 (1.274)***	49.272 (1.014)***	38.768 (1.133)***	36.322 (1.329)***	36.605 (1.483)***
Baseline approaches to learning	0.509 (0.012)***					
Baseline motor development		0.563 (0.012)***				
Baseline emergent literacy			0.735 (0.020)***			
Baseline emergent numeracy				0.630 (0.023)***		
Baseline social-emotional learning					0.591 (0.018)***	
Baseline executive functioning						0.468 (0.011)***
Constant	26.779 (1.102)***	18.057 (0.807)***	7.434 (0.675)***	12.650 (0.926)***	12.276 (0.687)***	25.276 (1.007)***
R^2 *N*	0.51 1,801	0.63 1,801	0.69 1,801	0.66 1,801	0.57 1,801	0.47 1,801

Note. All estimates use ANCOVA techniques with panel observations. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*p < .10. **p < .05. ***p < .01.

Exhibit F8. LATE Estimates of Effect of EYPP on IDELA Scores by Gender in *z*-Scores

	Motor development	Emergent literacy	Emergent numeracy	Social-emotional learning	Executive function	Approaches to learning
EYPP	0.044 (0.049)	0.032 (0.052)	0.048 (0.069)	0.099 (0.068)	0.085 (0.079)	0.036 (0.071)
EYPP * Midline	0.648 (0.133)***	0.643 (0.139)***	0.691 (0.178)***	0.788 (0.163)***	0.266 (0.181)	0.594 (0.172)***
EYPP * Endline	0.240 (0.154)	0.601 (0.148)***	0.770 (0.184)***	0.718 (0.189)***	0.042 (0.164)	0.158 (0.164)
EYPP * Midline * Male	-0.188 (0.095)**	-0.311 (0.095)***	-0.232 (0.090)***	-0.128 (0.134)	-0.124 (0.104)	-0.169 (0.099)*
EYPP * Endline * Male	-0.166 (0.118)	-0.307 (0.105)***	-0.329 (0.103)***	-0.082 (0.141)	-0.017 (0.112)	-0.136 (0.138)
Midline	-0.146 (0.048)***	-0.117 (0.049)**	-0.145 (0.064)**	-0.191 (0.051)***	-0.043 (0.067)	-0.130 (0.069)*
Endline	-0.034 (0.054)	-0.101 (0.050)**	-0.147 (0.065)**	-0.177 (0.066)***	0.005 (0.051)	-0.012 (0.061)
Baseline approaches to learning	0.612 (0.015)***					
Baseline motor development		0.668 (0.017)***				
Baseline emergent literacy			0.614 (0.022)***			
Baseline emergent numeracy				0.543 (0.015)***		
Baseline social-emotional learning					0.511 (0.014)***	
Baseline executive functioning						0.553 (0.015)***
Constant	-0.015 (0.020)	-0.015 (0.020)	-0.019 (0.023)	-0.030 (0.024)	-0.029 (0.026)	-0.015 (0.028)
R^2 *N*	0.37 1,801	0.43 1,801	0.37 1,801	0.33 1,801	0.26 1,801	0.30 1,801

Note. All estimates use ANCOVA techniques with panel observations. Coefficients are presented as z-scores. Robust standard errors clustered at the school level are in parentheses. All estimations control for the baseline value of the dependent variable.
*p < .10. **p < .05. ***p < .01.

Exhibit F9. ITT Estimates of Effect of EYPP on EGRA and EGMA Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
Treatment	-1.027 (2.969)	1.075 (1.521)	2.923 (1.932)	-1.688 (3.637)
Constant	41.888 (2.411)***	27.664 (1.235)***	52.222 (1.658)***	59.688 (2.365)***
R^2	0.00	0.00	0.00	0.00
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations only controlling for treatment. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F10. ITT Estimates of Effect of EYPP on EGRA and EGMA Scores in *z*-Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
Treatment	-0.025 (0.072)	0.052 (0.073)	0.114 (0.075)	-0.094 (0.202)
Constant	0.012 (0.058)	-0.030 (0.059)	-0.063 (0.065)	0.050 (0.132)
R^2	0.00	0.00	0.00	0.00
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations only controlling for treatment. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F11. LATE Estimates of Effect of EYPP on EGRA and EGMA Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
EYPP	-2.029 (5.831)	2.125 (2.988)	5.776 (3.763)	-6.136 (13.329)
Constant	41.890 (2.404)***	27.662 (1.231)***	52.215 (1.653)***	59.688 (2.320)***
R^2	0.00	.	.	.
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations using an instrumental variables approach. Random assignment to treatment is used to instrument enrolment in EYPP programming. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F12. LATE Estimates of Effect of EYPP on EGRA and EGMA Scores in *z*-Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
EYPP	-0.049 (0.141)	0.102 (0.143)	0.225 (0.147)	-0.341 (0.741)
Constant	0.013 (0.058)	-0.030 (0.059)	-0.063 (0.064)	0.050 (0.129)
R^2	0.00	.	.	.
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations using an instrumental variables approach. Random assignment to treatment is used to instrument enrolment in EYPP programming. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F13. ITT Estimates of Effect of EYPP on EGRA and EGMA Scores by Gender

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
Treatment	-0.368 (3.703)	1.076 (1.658)	1.321 (2.270)	1.287 (7.004)
Male	-8.550 (2.857)***	0.508 (1.466)	-1.381 (1.672)	3.125 (8.100)
Treatment*Male	-0.803 (3.952)	-0.028 (1.909)	3.113 (2.556)	-5.580 (9.879)
Constant	46.158 (2.841)***	27.411 (1.312)***	52.912 (1.811)***	58.125 (5.412)***
R^2	0.01	0.00	0.00	0.01
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations only controlling for treatment. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F14. ITT Estimates of Effect of EYPP on EGRA and EGMA Scores by Gender in *z*-Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
Treatment	-0.009 (0.089)	0.052 (0.080)	0.051 (0.088)	0.072 (0.390)
Male	-0.206 (0.069)***	0.024 (0.070)	-0.054 (0.065)	0.174 (0.451)
Treatment*Male	-0.019 (0.095)	-0.001 (0.092)	0.121 (0.100)	-0.310 (0.550)
Constant	0.115 (0.069)*	-0.042 (0.063)	-0.036 (0.071)	-0.037 (0.301)
R^2	0.01	0.00	0.00	0.01
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations only controlling for treatment. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F15. LATE Estimates of Effect of EYPP on EGRA and EGMA Scores by Gender

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
EYPP	7.450 (6.523)	1.582 (3.058)	3.869 (4.124)	-1.563 (27.791)
EYPP*Male	-18.509 (5.483)***	1.060 (2.423)	3.724 (3.790)	-6.289 (27.394)
Constant	41.901 (2.405)***	27.661 (1.231)***	52.213 (1.652)***	59.688 (2.320)***
R^2	0.00	.	.	.
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations using an instrumental variables approach. Random assignment to treatment is used to instrument enrolment in EYPP programming. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

Exhibit F16. LATE Estimates of Effect of EYPP on EGRA and EGMA Scores by Gender in *z*-Scores

	Familiar Word Reading	Number Identification	Number Discrimination	Missing Number
EYPP	0.180 (0.157)	0.076 (0.147)	0.151 (0.161)	-0.087 (1.546)
EYPP*Male	-0.446 (0.132)***	0.051 (0.116)	0.145 (0.148)	-0.350 (1.524)
Constant	0.013 (0.058)	-0.030 (0.059)	-0.063 (0.064)	0.050 (0.129)
R^2	0.00	.	.	.
N	1,801	1,801	1,801	72

Note. All estimates use ordinary least squares regression with endline observations using an instrumental variables approach. Random assignment to treatment is used to instrument enrolment in EYPP programming. Robust standard errors clustered at the school level are in parentheses.
*p < .10. **p < .05. ***p < .01.

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