Save the Children

PVH CORP. AND SAVE THE CHILDREN


ASSESSING SCHOOL READINESS SKILLS IN CHILDREN AGED 3-6 YEARS ACROSS 50 PRESCHOOL CENTRES IN RURAL BANGALORE - A COMPARISON OF BASELINE AND ENDLINE

September 2019

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Executive summary

This report presents the results of a follow-up study of the RCT that took place in Karnataka, India in 2017-2018. Within the scopes of the current study, funded by PvH Corp, 50 Anganwadi (preschool centers) in rural Bangalore received the program intervention including beautification of Anganwadi center walls, a greenboard, Ready to Learn Emergent Literacy and Math (ELM) teacher training, school supplies a mobilization campaign, and educational material support to parents and mother's groups.

We assessed children's developmental status using the International Development and Early Learning Assessment (IDELA), which covers four developmental domains: early numeracy, early literacy, social-emotional development and motor development. A baseline survey was conducted prior to the start of the program, and an endline data collection was conducted seven months later. The study has revealed that on average children's performance has increased substantially over the period covered. The gains were large for both girls and boys, across all age groups and developmental domains. Younger children and children who scored low in the baseline assessment gained the most.

Since all Anganwadi centers in this study received the same treatment, it is difficult to separate the effect of the intervention from the effect of natural age-appropriate development. However, magnitude of gain in each developmental domain and on IDELA total is roughly similar to the gains found in the 2017-2018 RCT for the treatment group. In addition, children attending Anganwadi centers belonging to the original treatment group in the RCT gained slightly more compared to their peers from the origina control Anganwadi. This might indicate that two-year intervention might be more beneficial for preschool centers compared to one-year intervention.

Introduction

Background

The government of India runs one of the world's largest programs for early childhood development - Integrated Child Development Services (ICDS) - which offers a package of health, nutrition and preschool education services to children through Anganwadi Centers. This is for children from the prenatal stage to age 6, as well as for pregnant and lactating mothers. Anganwadi Centers work on integrating health, hygiene and nutrition and early education,

Cross-sectoral services for children at Anganwadi centers are delivered through one Anganwadi worker (AW). However, most Anganwadi workers are not well-educated and may not have the required skills to independently deliver holistic services for young children. An analysis submitted to the Karnataka State High Court in June 2013 attributes low-skilled Anganwadi teachers and poor learning environments as factors responsible for high dropout rates in the early years, resulting in children ending up on the streets.

This project aimed to address this concern by focusing on improving learning levels and school readiness by providing a conducive and stimulating environment for early learning for children, capacity building of Anganwadi teachers and caregivers (parents/guardians) and also advocacy to improve the quality of pre-school education in Anganwadis.

Figure 1. Doddaballapur Taluka Map

The Project targeted rural Doddaballapur in Karnataka State where a majority of children are first generation school goers living in poor families mainly engaged as low-skilled garment industry workers. The 'Apparel Park' in Doddabalapur town employs about 7,450 women garment workers from the area. The project provides disadvantaged and vulnerable children whose mothers are mostly employed in

garment factories the opportunity to a quality preschool education, giving them a better chance to be ready and to succeed in school.

Project

Save the Children implemented this project through a partner NGO, Makkala Jagriti (Awakening of Children). This NGO was founded in 2003 and provides holistic learning platforms and empowers socio-economically deprived children, youth and their community as a whole. As an implementing partner of Save the Children they are supporting to enhance the quality of pre-school education in Anganwadi Centers, to become spaces for holistic development of children, with a special focus on fostering early learning Outcomes.

The project started in September 2017 and initially two sets of Anganwadi centers were identified to participate. Control group Anganwadi received only 'light' support through the program, while the treatment group received more extensive support as shown on figure 2.

Figure 2. Light touch and heavy touch programming

Light touch	Heavy touch
Material support to classrooms[1]	Material support to classrooms
	Early Literacy and Mathematics teaching and learning material distribution to families and centers
	Parents Workshops,monthly mother's groups meetings, and home visits
	Capacity building for Anganwadi teachers

To evaluate the effectiveness of the intervention a cluster-randomized control trial (RCT) was conducted in 2018, which found that the children who benefited from the 'heavy touch' intervention had improved overall developmental scores on the International Development and Early Learning Assessment (IDELA), and demonstrated the strongest gains in Emergent Numeracy and Motor skills, with an emphasis on fine motor skills.

The project was extended for the school year 2018-2019 and this time all participating Anganwadi centers received the 'heavy touch' programming. This report details how children's developmental outcomes have changed during the second year of implementation. The list of Anganwadi centers and number of children from each of them participating in the study is presented in appendix A.

[1] This support comprised primarily of painting of classrooms and the distribution of greenboards. The classrooms were painted to improve the educational environment of the classroom by including, for example, English and Kannada, a calendar with weekly theme, shapes and colors, numbers and objects, etc.

Design, methodology and data collection

A total of 188 students[2] were assessed in August, 2018 in 41 Anganwadi centers. As mentioned above, all of these centers received the 'heavy touch' programming in the school year 2018-2019 and therefore the study in principle does not differentiate between treatment and control schools. While the number of students participating in the study is not very high, for this type of comparison of baseline and endline without a comparison group it has sufficient statistical power since the differences between baseline and endline scores are expected to be very high.

The children participating in the study were then re-assessed in March, 2019 using the same tool. Therefore, the endline assessment was done about 7 months after the program started. Out of the 188 children who were observed in the baseline study it was possible to assess 136. Table 1 summarizes the key characteristics of the sample in baseline and endline.

Table 1 Gender and age composition in baseline and endline sample

	Girls	2 year olds	3 year olds	4 year olds	5 year olds	6 year olds
Baseline	47.2 %	2.5%	50.3%	38.3%	9%	0
Endline	50 %	0	6%	69.7%	22.4%	2%

As we can see, attrition was not uniform across sexes and the share of girls in the endline dataset is about 4 percentage points higher compared to the baseline. About half of all the children in the baseline are 3 years old while almost 70 percent of all the children in the endline are 4 years old.

Measurement

International Development and Learning Assessment (IDELA)

We use the International Development and Early Learning Assessment (IDELA) to measure the status of children's early learning and development with direct observation through a series of games and activities. We collected IDELA data at both baseline and endline points, and the results from IDELA and its component domains serve as our primary endpoints for estimating the impact of the project.

Twenty-four standard subtasks are included in the IDELA: Child Assessment as listed in **Table 2**. The Total IDELA score comprises twenty-two of these subtasks, those that fall under the core domains of Motor Development, Emergent Literacy, Emergent Numeracy, and Social-Emotional Domains. Additional non-core items attempt to measure children's Executive Functioning (through tasks that measure inhibitory control and short-term memory) and observations of children's Attitudes towards Learning.

Table 2. IDELA Child Assessment Subtasks

Motor Development	Emergent Literacy	Emergent Numeracy	Social-Emotional Development	Other items
Hopping	Print Awareness	Comparison by Size and Length	Friends	Approaches to Learning

[2] Initially 323 children from original 50 Anganwadi centers participated in the study but due to the poor quality of data, analysis of the baseline is limited to 188 children from 41 Anganwadi centers

Copying a Shape	Oral Vocabulary	Sorting and Classification	Emotional Awareness/Regulation	Inhibitory control
Drawing a Person	Letter Identification	Number Identification	Empathy/Perspective Taking	Short-term memory
Folding Paper	Emergent Writing	Shape Identification	Sharing/Solving Conflict	
	First Letter Sounds	One-to-One Correspondence	Self-Awareness	
	Oral Comprehension	Addition and Subtraction		
		Puzzle Completion		

IDELA is a standardized assessment, but must be contextualized in each administration to ensure the questions are culturally and developmentally appropriate. In this administration of the IDELA assessment, we made no major changes to the tool.

In order to ensure consistent administration of IDELA, enumerators go through a five-day training including field visits. We report the internal consistency of the tool at both baseline and endline in **Appendix B: Internal consistency of IDELA at baseline and endline**. Overall, we find that the instrument performed well from an internal consistency standpoint. We observe a Cronbach's alpha values of 0.901 at baseline and 0.89 at endline, indicating that the tool had "Excellent" reliability at baseline, and nearly "Excellent" reliability at endline[3]. In addition, as shown on figures B.1 and B.2 in the appendix, correlations between IDELA domains are quite strong.

Ethics

As with all human subject research conducted at Save the Children, we submitted study protocols to Save the Children's Ethics Review Committee who provided review and approval.

In order to protect the rights of children and participants, we secured written caregiver consent and child assent prior to conducting the child interview. Children were informed about the purpose of the study in child-friendly language, and provided the opportunity to stop the interview at any point.

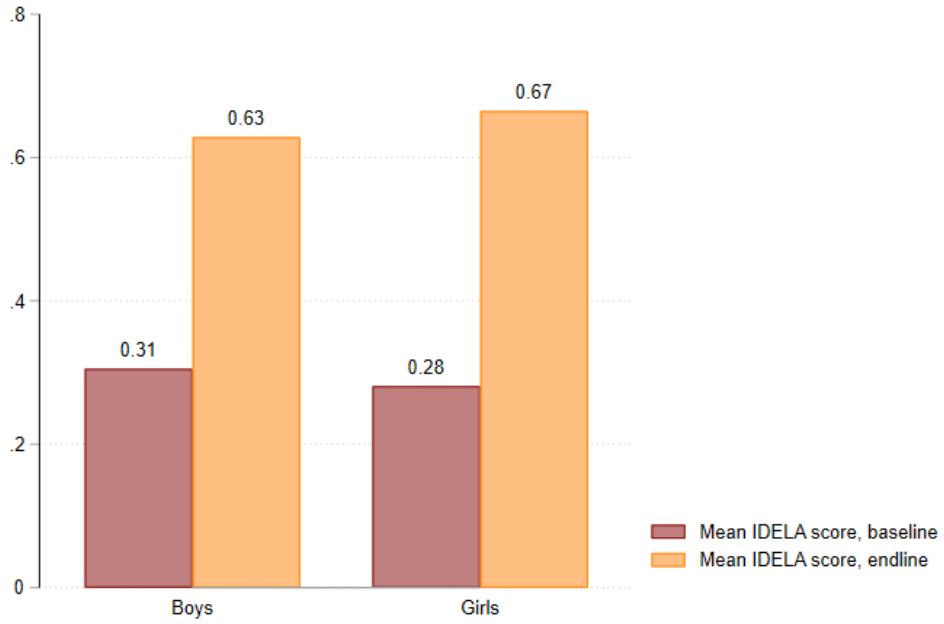
In order to collect data with the IDELA-Classroom Environment tool, we received permission from the teacher of the Anganwadi center. Written consent was obtained from caregivers before conducting the IDELA-Home Environment survey.

Descriptive analysis

As we can see from figure 3, performance of children participating in the study has improved substantially across both sexes – on average IDELA scores of all children in the study improved by about 0.35 points, which roughly equals to 2 standard deviations.

[3] *DeVellis, R.F. (2012). Scale development: Theory and applications. Los Angeles: Sage. pp. 109–110.*

Figure 3 Average total IDELA scores

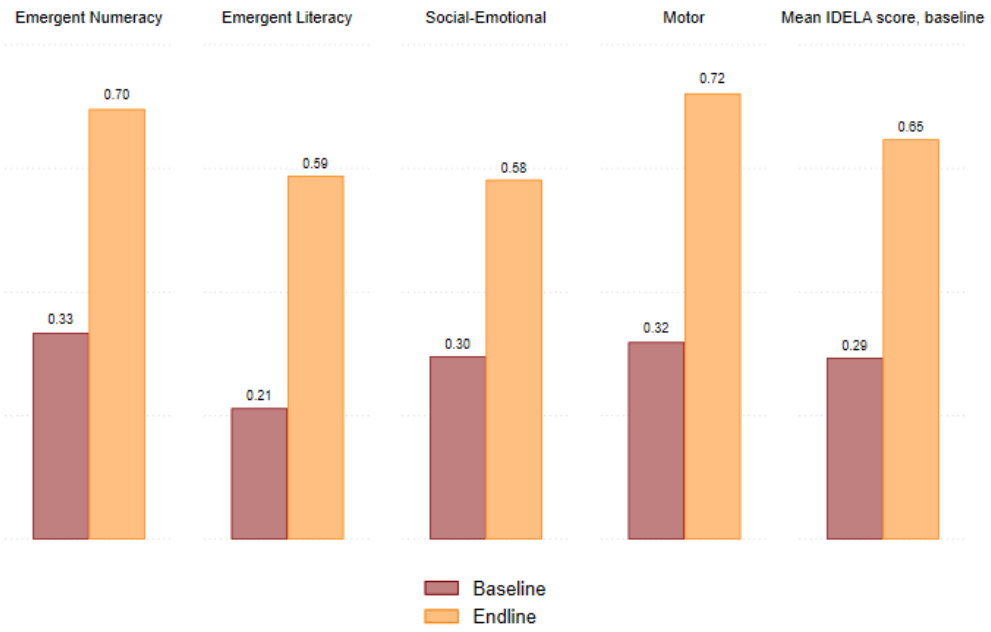


Since we did not have a comparison group in the study, it is impossible to know how much of this gain can be attributed to Save the Children intervention. But comparing the data to the results of the randomized control trial conducted by Save the Children in the same centers in 2017-2018, we can see that average gain on IDELA scores this time is even higher than the average gain by the intervention group in the RCT and much higher compared to the control group.

IDELA domains

Further we explore how children's performance has improved in each of IDELA domains. Since differences between boys and girls are almost non-existent, we present the aggregate analysis. However, in the multivariate analysis section, we control for gender in every mode. Figure 3 shows average gain for all children from baseline to endline across all four domain and overall IDELA score. As we can see, children have gained substantially in all domains. The gain in social-emotional development domain is the least pronounced. However, even in this area children have gained about 0.28 points, which equals roughly 1.5 standard deviations.

Figure 4 Change in average scores from baseline to endline

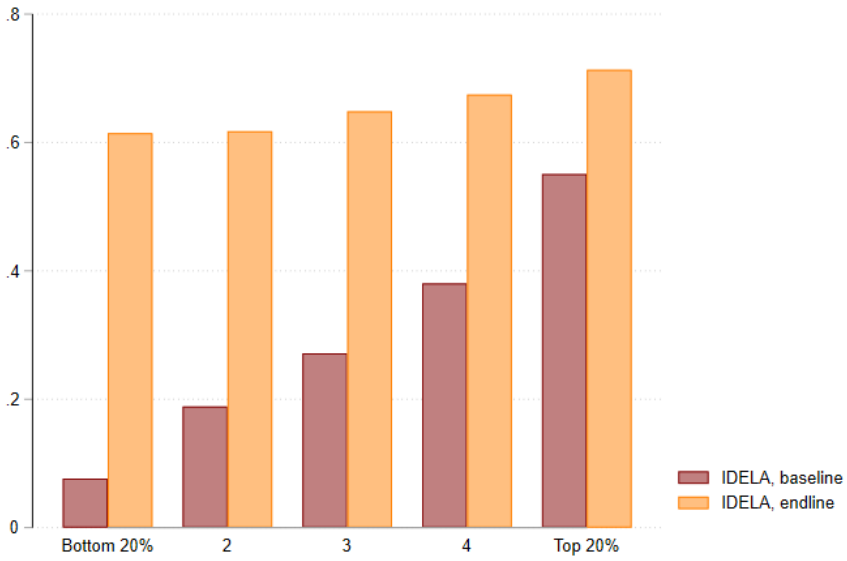


Again, in no way can we assume how much of the observed change has been due to the program intervention in each of these domains since at this early age children in general develop and learn very fast.

Moving beyond averages, figures C.1 and C.2 in the appendix show that for IDELA total score and each of the domains entire distribution has shifted heavily to the right. Distribution of scores is substantially skewed at baseline and is somewhat normal at endline.

The gains observed in total IDELA scores and in separate domains is not uniform across the distribution of baseline IDELA scores. In fact, as figure 5 shows, those children, who were in the bottom 20 percent of all the observed children, gained the most and those, who were in the top 20 %, gained the least. The latter scored higher than the former in the endline assessment as well. Overall, as we can see, distribution remains roughly the same, but differences between groups by baseline performance are much smaller.

Figure 5 Gains on IDELA by the distribution of scores at baseline

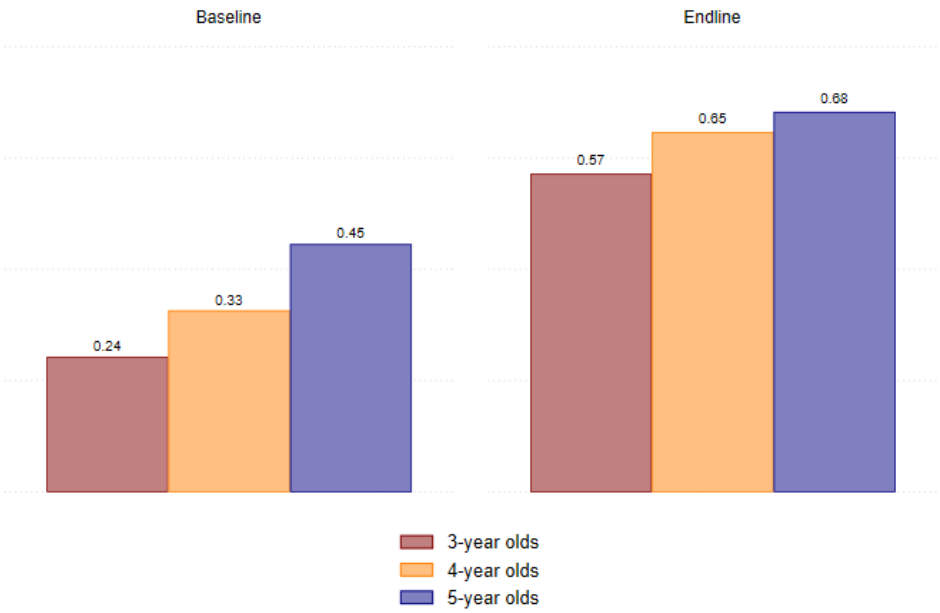


Total IDELA scores between baseline and endline are moderately correlated (r = 0.24), which is in line with other evidence based on IDELA. Figure A3 in the appendix depicts this relationship.

IDELA scores by age

IDELA is a measure of child development and naturally much of variation in IDELA scores can be explained by children's age. Figure 6 shows average IDELA scores for the children of different age at baseline and endline. As we can see, at both observation periods older children perform better compared to younger children and for each age group performance improves substantially from baseline to endline.

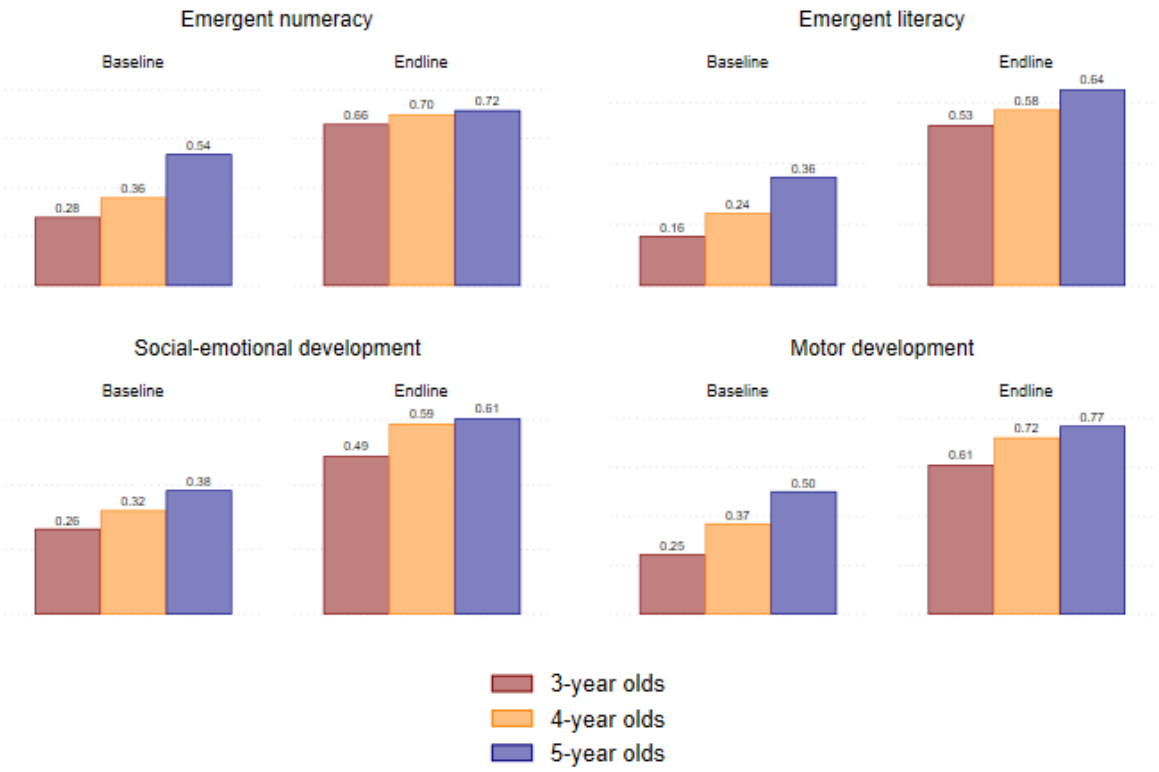
Figure 6 Average IDELA score change by age groups



As we can see, naturally, 4-year olds are doing better than 3 year-olds in the baseline study; and 5 year-olds are doing than 4 year-olds in the endline study. However, it should be noted that age differences in the endline data are much smaller which is to be expected since developmental differences by age reduce as children grow up. The figure also shows that difference in the scores of 4-year-olds in the endline and 4-year-olds in the baseline – 0.32 points – is substantially larger than the difference between 3 and 4-year-olds in the baseline – 0.12 points.

Looking at the distribution of scores by age and developmental domain on figure 8, we can see that overall trend is the same in each domain – performance of children of each age group has substantially improved from baseline to endline. Moreover, in each domain 3-year-olds at the endline perform better compared to the 5-year-olds at baseline.

Figure 7 Average domain score change by age groups



Multivariate analysis

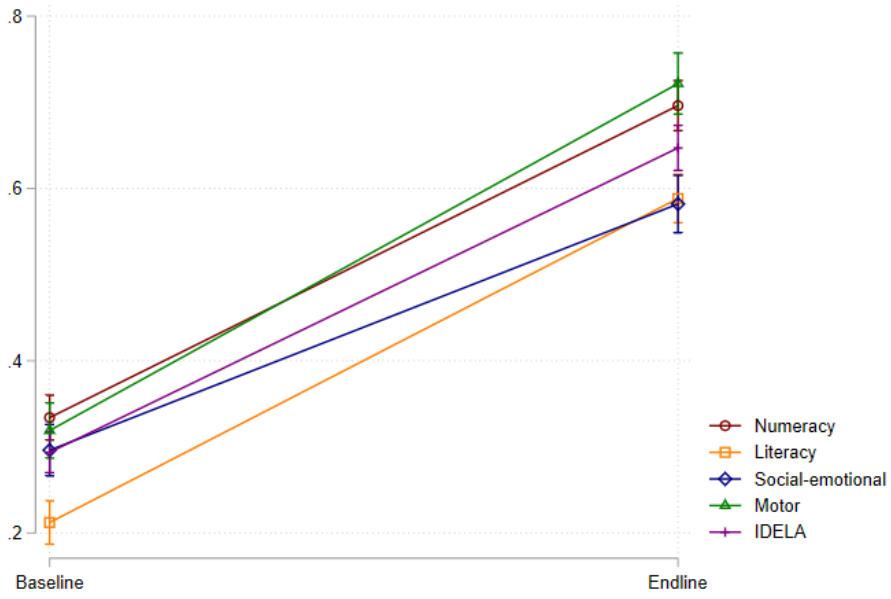
In this section we perform multivariate analysis of the data to examine the findings of the descriptive analysis and check whether differences between various groups are statistically significant. Even though the current study was not a cluster randomized trial and all Anganwadi centers received the same intervention, we further perform analysis by the treatment status of Anganwadi in 2017-2018 RCT.

First, we fit 5 OLS regression models with total IDELA score, and scores for each IDELA domains as a dependent variable, using sex of the child and observation point – baseline or endline – as independent variables (regression output is presented in table 2.1. in Appendix 2).

$$IDELA/domains = \beta_0 + \beta_1 * endline + \beta_2 * Child\ is\ female + \epsilon$$

Predicted average scores on IDELA and in each domain calculated from this model are represented on figure 8. As we can see, differences between baseline and endline scores in each domain are very large and they are statistically significant. Differences in differences between average scores in each of the domains, on the other hand, are almost non-existent at baseline as well as endline with the possible exception of the literacy score: while children on average scored lowest on literacy at baseline, this difference has disappeared at the endline.

Figure 8 predicted average scores by domains at baseline and endline

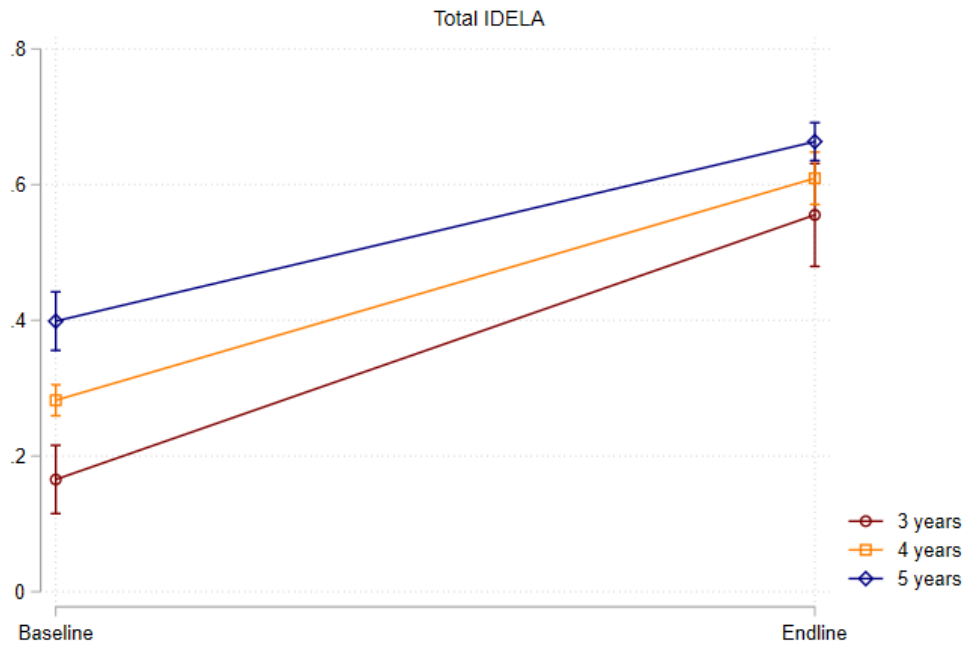


Further, we introduce child's age as the predictor variable to the model.

$$IDELA = \beta_0 + \beta_1 * endline + \beta_2 * Child'sage + \beta_3 * Child's\ ageXendline + \beta_5 * Child\ is\ female + \epsilon$$

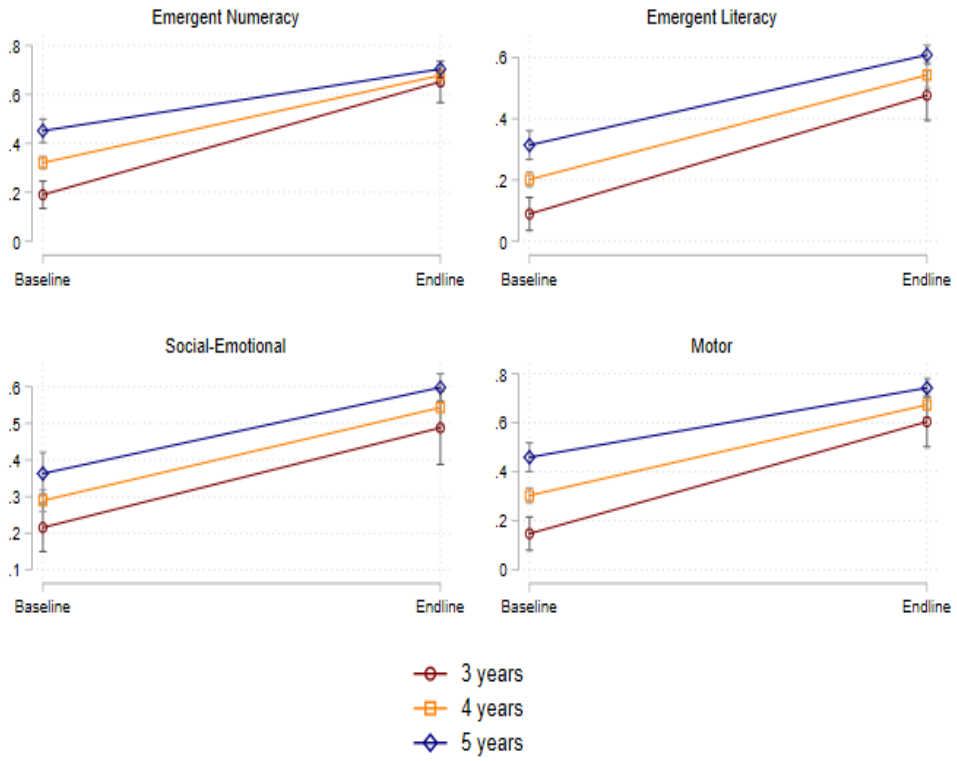
Figure 9 represents predicted scores for 3, 4 and 5 year-olds at baseline and endline holding sex of the child constant. This figure confirms the finding that performance in terms of total IDELA scores has substantially improved for all age groups and that this improvement is statistically significant for each age group: as we can see, 95% confidence intervals do not overlap for separate age groups. However, interestingly, differences between children of different ages at endline become much smaller and the predicted scores for 3, 4 and 5-year-olds are not very different from each other at endline.

Figure 9 predicted IDELA scores at baseline and endline by age



Same trend is observed for every domain within IDELA, as shown on figure 10 with the exception of social-emotional development where differences by age have remained constant from baseline to endline.

Figure 10 Predicted scores by domains and age groups



Treatment effect

As the last step in the analysis, we examine whether the gains of children in endline compared to the baseline differ by the treatment states of the 2017-2018 study. As described above, in the school year 2018-2019 all Anganwadi centers received similar intervention and therefore there is no reason to expect any differences. However, since these are the same Anganwadi centers that participated in the 2017-2018 cluster RCT, it is interesting to check whether any of the treatment effects that were observed carried over in the next school year.

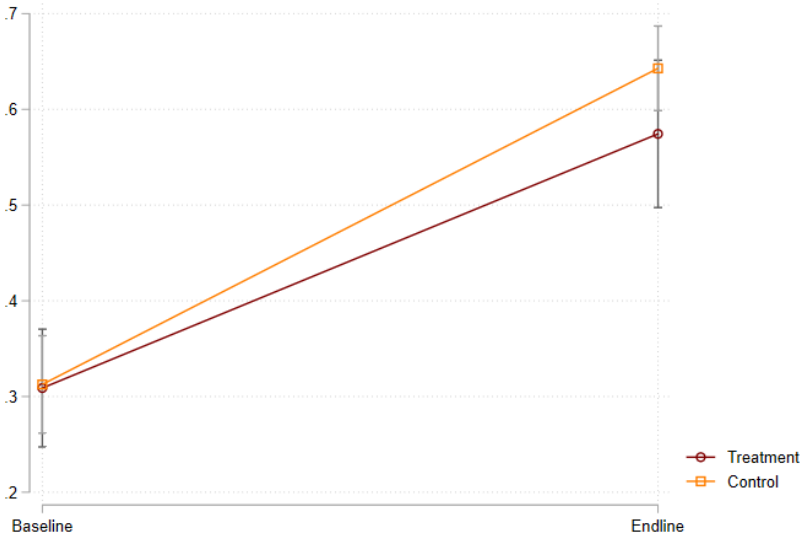
For this purpose, we fit the following OLS regression model with average IDELA score as a dependent variable, status of Anganwadi center in the RCT (treatment/control), observation point (baseline/endline), interaction between the two, child's age and sex. Standard errors are clustered aournd Anganwadi centers to account for random assignment to treatment group:

$$IDELA = \beta_0 + \beta_1 * treat + \beta_2 * endline + \beta_3 * endlineXtreat + \beta_4 * Child's\ age + \beta_5 * Child\ is\ female + \epsilon$$

Results from this model and similar models using four IDELA domains as dependent variables are presented in table 2.2. in Appendix 2. Figure 11 shows predicted average IDELA scores for children by Anganwadi treatment status at baseline and endline. As we can see, at baseline there was no difference between children attending the Anganwadi centers, which were assigned to treatment and control groups in the 2017-2018 RCT. At endline, however, children from those centers , which were assigned to the treatment group in 2017-2018 RCT, performed about 0.08 points better compared to the their peers from

the original control centers, which equals roughly one third of standard deviation. While this difference is sizable, we should interpret it with caution since, as we can see, the difference between the two groups at endline is not statistically significant at 0.05 level as confidence intervals overlap. The reason for this could be small number of observations at the endline: while the number of observations is enough to make conclusions regarding differences between baseline and endline with certain level of certainty, detection of differences in differences between the original treatment and comparison groups requires more statistical power. Nevertheless, this can be an indication that 2-year implementation of the program benefits Anganwandi centers substantially more compared to the 1-year implementation.

Figure 11 Predicted IDELA scores by treatment group at baseline and endline



Results of the same regression model from all IDELA domains are presented in table D.3 in the appendix. As we can see, original treatment group has gained slightly more compared to the original control group in all domains except social-emotional development. However, the difference is sizable (and statistically significant) only for 'motor development'.

Discussion

The study has revealed that students in the Anganwadi centers participating in the study gained about 0.35 points on total IDELA scores equaling roughly 2 standard deviations, which can be considered a substantial improvement. The improvement has been roughly equal across all IDELA domains, with gains in social-emotional development slightly lower compared to others. We performed initial analysis by gender and age and found that differences between boys and girls both at baseline and endline were very small.

The analysis also showed that older children, as expected, performed better both at baseline and endline. However, age differences in performance were much smaller at endline indicating that younger children gained more and caught up with their older peers during the time of the intervention. Our findings also suggest that the children who performed worst in the baseline assessment were the ones who gained the most and in the endline performed only marginally worse compared to their peers.

In addition, we estimated the effect of belonging to the treatment group in the 2017-2018 RCT. Even though in the period under the current study all Anganwadi received exactly the same treatment, we still see a small effect of treatment, albeit not statistically significant, which might indicate that two-year 'heavy touch' intervention affects early childhood centers more than one-year intervention. This finding must be interpreted with caution but it could contribute to the discussion regarding the duration and associated benefit of the intervention for early childhood centers.

Appendix A: List of Anganwadi centersand number of children

N	Anganwadi	Baseline	Endline
1	Anjanamurthinagar	3	1
2	Bashethalli-02	9	5
3	Bashethalli-03_R	4	4
4	Bhuvneshwarinagara	5	5
5	Bommanahalli	5	4
6	Chandrashekara_Pura	7	4
7	Chikka_belavangala-01	4	4
8	Dodda_Thumkur	5	4
9	Dodda_bellavangala-02	3	3
10	Ghatti._S.S	6	5
11	Hanabe-01	5	3
12	Hanabe-02	3	2
13	Hosauddya	4	4
14	Hulkunte-01	3	3
15	Hulkunte-02	2	1
16	JP_Nagar-02	7	5
17	Kacheripalya	2	2
18	Kanmangala_Colony	3	2
19	Kumbarpete-02	3	3
20	Kumbarpete-03	4	3
21	Kurubarahalli	4	4
22	Majjarahosahalli	4	3
23	Marlenahalli	4	3
24	Melkote	15	13
25	Muthasandra	6	6
26	Palanjogihalli	12	7
27	Ragunathpura	2	2
28	Railway_Station(r)	2	
29	Rajgattha-01	10	6
30	Rajgattha-02	10	7
31	Rojipura-01	4	4
32	Rojipura-02	6	5
33	Sakkaregollahalli-01	5	4
34	Sanjaynagara	1	1
35	Shirvara	2	1
36	Siddanayakanahalli	8	7
37	Sulekunte	3	3
38	Thimmasandra	1	1
39	Veerabhadrayapalya-02	2	
40	Vijaya Nagar	5	4
41	Vinayaka Nagar	8	4
	TOTAL	201	152

Appendix B: Internal consistency of IDELA at baseline and endline

Table B.1 Internal consistency of IDELA items, baseline

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
sizepct	188	+	0.5958	0.5341	.0257617	0.8960
shapeidpct	188	+	0.6187	0.5693	.0260298	0.8951
sortpct	188	+	0.6347	0.5582	.0247519	0.8962
numberidpct	188	+	0.4431	0.4171	.0278805	0.8997
onetoonepct	188	+	0.5970	0.5372	.0258035	0.8958
operationpct	188	+	0.5970	0.5372	.0258035	0.8958
puzzlepct	188	+	0.5569	0.5124	.0267182	0.8968
papct	188	+	0.6730	0.6159	.0250815	0.8936
letteridpct	188	+	0.5622	0.5258	.0270039	0.8971
expvocabpct	188	+	0.7475	0.7242	.0264241	0.8941
oralcomppct	188	+	0.7321	0.6883	.025032	0.8917
lettersoun~t	188	+	0.3043	0.2649	.0280061	0.9011
writepct	188	+	0.5424	0.4798	.0261988	0.8973
personalpct	188	+	0.5056	0.4630	.027107	0.8980
friendspct	188	+	0.5989	0.5585	.0265988	0.8960
emotionpct	188	+	0.4683	0.4057	.026754	0.8989
conflictpct	188	+	0.5064	0.4214	.025912	0.9001
empathypct	188	+	0.5140	0.4384	.0260704	0.8989
drawhumanpct	188	+	0.6765	0.6303	.0255988	0.8935
foldpct	188	+	0.6385	0.5860	.0257002	0.8946
copyshapepct	188	+	0.6888	0.6319	.0248786	0.8931
hoppct	185	+	0.5592	0.4906	.025949	0.8974
Test scale					.0261393	0.9007

Table B.2 Internal consistency of IDELA items, endline

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
e_sizepct	151	+	0.2492	0.2201	.0221024	0.8907
e_shapeidpct	151	+	0.6656	0.6305	.0205523	0.8830
e_sortpct	151	+	0.4712	0.4016	.0207287	0.8877
e_numberid~t	151	+	0.5636	0.5255	.021015	0.8855
e_onetoone~t	151	+	0.6874	0.6379	.0197307	0.8810
e_operatio~t	151	+	0.6874	0.6379	.0197307	0.8810
e_puzzlepct	151	+	0.5319	0.4750	.0206472	0.8857
e_papct	151	+	0.6785	0.6163	.0193074	0.8813
e_letterid~t	151	+	0.6071	0.5498	.0201347	0.8836
e_expvocab~t	151	+	0.5453	0.5045	.0210201	0.8858
e_oralcomp~t	151	+	0.6030	0.5627	.0207339	0.8843
e_letterso~t	151	+	0.6428	0.5726	.0194077	0.8829
e_writepct	151	+	0.3203	0.2447	.0214299	0.8917
e_personal~t	151	+	0.5301	0.4963	.0212958	0.8866
e_friendspct	151	+	0.3094	0.2669	.0218155	0.8900
e_emotionpct	151	+	0.6460	0.5745	.0193376	0.8829
e_conflict~t	151	+	0.7101	0.6367	.0185007	0.8813
e_empathypct	151	+	0.6093	0.5194	.0192138	0.8862
e_drawhuma~t	151	+	0.6793	0.6275	.0197055	0.8812
e_foldpct	151	+	0.4415	0.3787	.0210132	0.8880
e_copyshap~t	151	+	0.5622	0.5062	.0204867	0.8849
e_hoppct	151	+	0.4036	0.3430	.0212284	0.8888
Test scale					.0204154	0.8899

Figure B.1 Correlation between IDELA domains, baseline

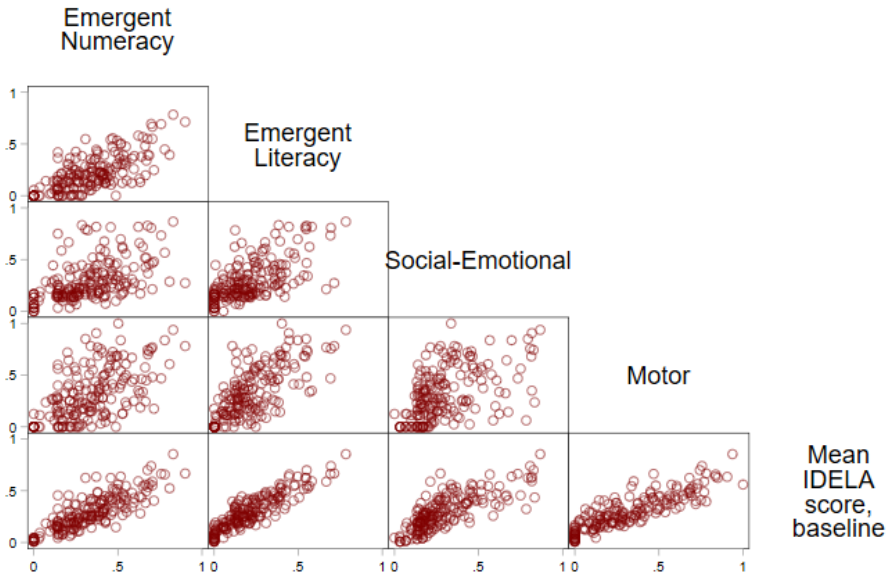
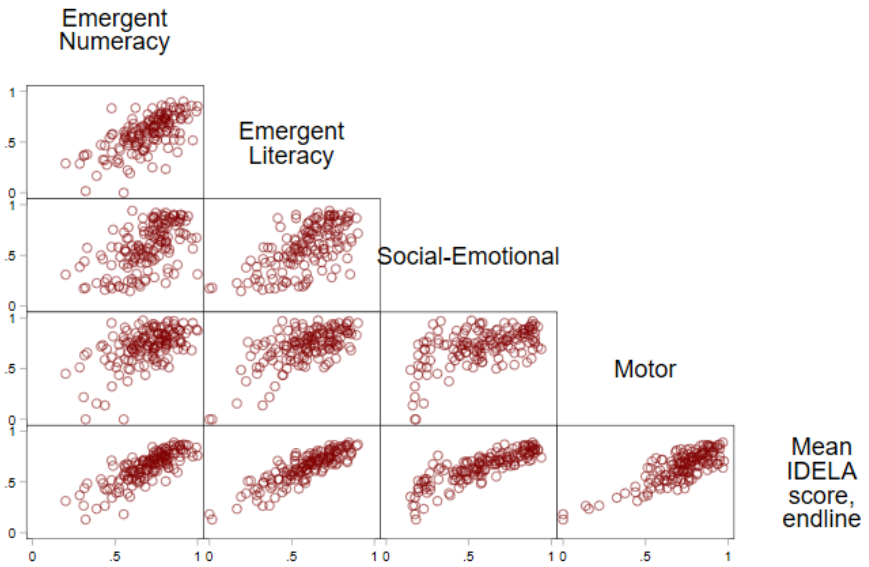


Figure B.2 Correlation between IDELA domains, endline



Appendix C : Distributions of IDELA scores at baseline and endline

Figure C.1 Distribution of scores, baseline

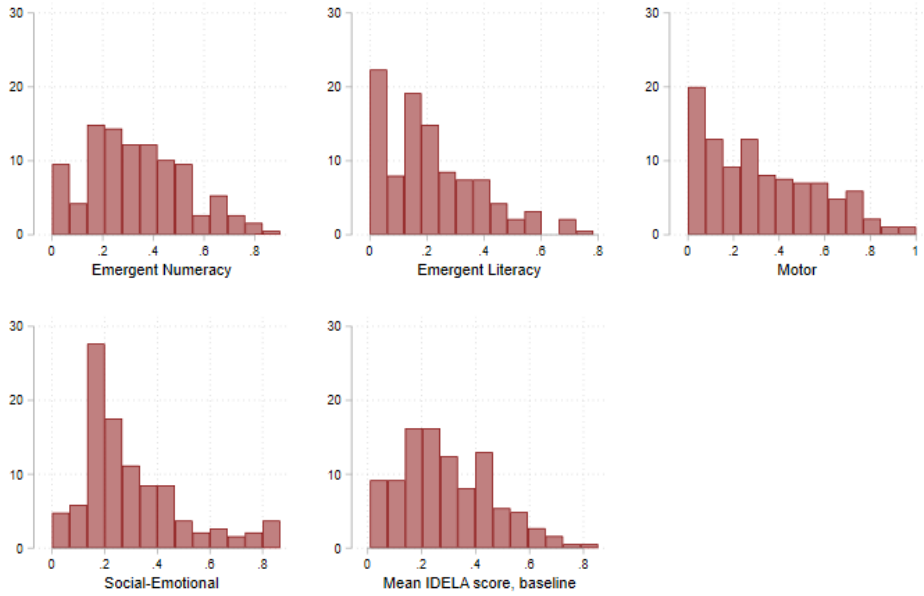


Figure C.2 Distribution of scores, endline

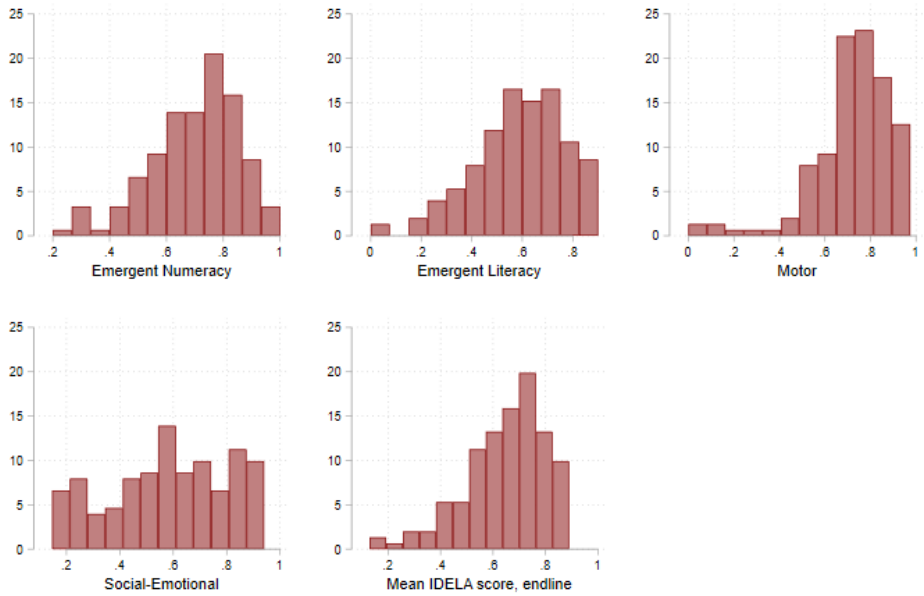
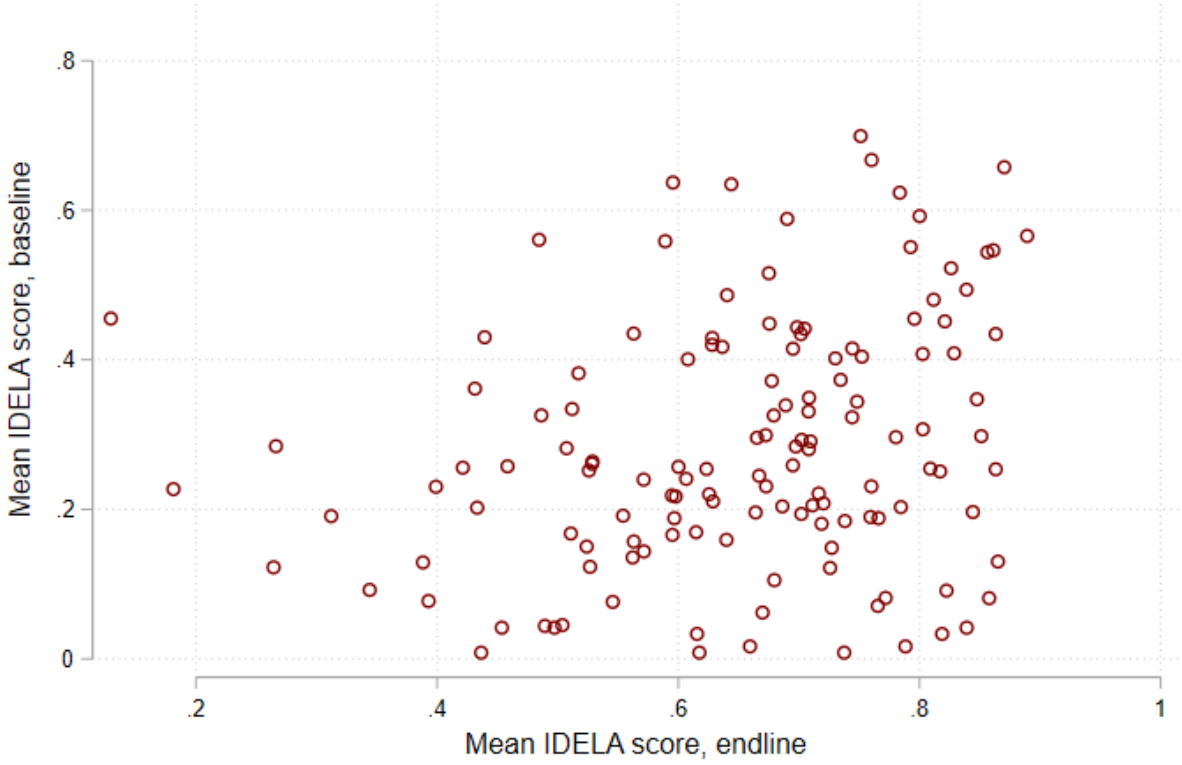


Figure C.3 Correlation between baseline and endline IDELA scores



Appendix D: OLS regression models

Table D.1 Basic model with baseline and child's sex as predictors

Predictors	Emergent Numeracy	Emergent Literacy	Social-Emotional	Motor	Total IDELA
Endline	0.36***	0.38***	0.29***	0.40***	0.35***
Ref. category 'Baseline'	[0.32,0.40]	[0.34,0.41]	[0.24,0.33]	[0.36,0.45]	[0.32,0.39]
Girl	-0.02	0.02	0.01	-0.01	0.00
Ref. category 'Boy'	[-0.05,0.02]	[-0.01,0.06]	[-0.03,0.06]	[-0.06,0.03]	[-0.03,0.04]
Constant	0.34***	0.20***	0.29***	0.33***	0.29***
	[0.31,0.37]	[0.17,0.23]	[0.25,0.33]	[0.29,0.37]	[0.26,0.32]
Observations	339	339	339	336	336
R^2	0.499	0.536	0.320	0.452	0.538

95% confidence intervals in brackets
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D.2 Effect of child's age on gains

Predictors	Emergent Numeracy	Emergent Literacy	Social-Emotional	Motor	Total IDELA
Endline	0.78***	0.53***	0.33	0.72***	0.58***
Ref. category 'Baseline'	[0.48,1.07]	[0.24,0.81]	[-0.02,0.67]	[0.36,1.07]	[0.32,0.84]
Child's age	0.13***	0.11***	0.07**	0.16***	0.12***
	[0.09,0.18]	[0.07,0.16]	[0.02,0.13]	[0.10,0.21]	[0.08,0.16]
Endline*Age	-0.10**	-0.05	-0.02	-0.09*	-0.06*
	[-0.17,-0.04]	[-0.11,0.02]	[-0.10,0.06]	[-0.17,-0.01]	[-0.12,-0.00]
Girl	-0.01	0.03	0.01	-0.01	0.00
Ref. category 'Boy'	[-0.05,0.02]	[-0.01,0.06]	[-0.03,0.06]	[-0.06,0.03]	[-0.03,0.04]
Constant	-0.19*	-0.26**	-0.01	-0.31**	-0.19*
	[-0.38,-0.01]	[-0.44,-0.08]	[-0.24,0.21]	[-0.55,-0.08]	[-0.36,-0.02]
Observations	339	339	339	336	336
R^2	0.544	0.578	0.342	0.506	0.586

95% confidence intervals in brackets
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table D.3 Effect of the intervention by treatment group

Predictors	Emergent Numeracy	Emergent Literacy	Social-Emotional	Motor	Total IDELA
Endline	0.29***	0.28***	0.25***	0.26***	0.27***
Ref. category 'Baseline'	[0.23,0.36]	[0.22,0.34]	[0.18,0.32]	[0.19,0.34]	[0.21,0.32]
Treatment	0.02	0.02	0.06	-0.05	0.00
Ref. category 'Control'	[-0.03,0.08]	[-0.03,0.07]	[-0.00,0.12]	[-0.12,0.01]	[-0.04,0.05]
Endline*Treatment	0.04	0.07	-0.01	0.13**	0.06
	[-0.04,0.11]	[-0.00,0.14]	[-0.10,0.08]	[0.03,0.22]	[-0.00,0.13]
Child's age	0.07***	0.09***	0.07***	0.11***	0.08***
	[0.04,0.11]	[0.05,0.12]	[0.03,0.11]	[0.07,0.15]	[0.05,0.11]
Girl	-0.02	0.01	0.00	-0.02	-0.00
Ref. category 'Boy'	[-0.06,0.01]	[-0.02,0.05]	[-0.04,0.05]	[-0.07,0.03]	[-0.04,0.03]
Constant	0.02	-0.16*	-0.04	-0.09	-0.06
	[-0.12,0.16]	[-0.30,-0.03]	[-0.20,0.13]	[-0.26,0.08]	[-0.19,0.07]
Observations	318	318	318	315	315
R^2	0.545	0.595	0.364	0.517	0.593

95% confidence intervals in brackets

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$