Anchal ECD Intervention Impact Assessment Report, 2020

Rehana Parveen
Aminur Rahman

CIPRB Center for Injury Prevention and Research Bangladesh (CIPRB)

Lifeboats Royale National Lifeboat Institution (RNLI)

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1. Executive summary

Context

The ECD assessment study report focused on the ECD (Early Childhood Development) outcomes of the children attended *Anchal* supervision and ECD care intervention. The ECD intervention named *Anchais* a child drowning reduction intervention implemented under the Project BHASA, a comprehensive drowning reduction project implemented in the southern part of Bangladesh. The study aimed to measure the ECD progress of the children who received regular supervision and ECD care services in the *Anchal* centers in rural Bangladesh. Assessment for ECD (Early childhood Development) intervention is critical to improving children's early developmental outcomes. As a result of ECD outcome assessment, practitioners gain insights about children's strengths, abilities, growth and progress of their developmental period. Also, to make decision about programs as well as to measure impact of the program, assessment is essential. So, we designed a study to measure the progress of the intervention in the context of children Early Childhood Development skills.

The baseline assessment was carried out between December and February 2017 to identify the pre-intervention ECD status of children and to establish a reference point to measure the outcomes of the intervention. Upon completion of the first phase, the end-line assessment was undertaken between November and December 2019.

Methods

We used a Randomized Control Trial (RCT) design at the baseline and at the end-line. As an assessment tool, the International Developmental and Early Learning Assessment (IDELA) were used to assess children's ECD outcomes and a caregiver tool used to learn about home environment in the study. We assessed 53 intervention children their caregivers at baseline and 55 at end-line. Similarly, 51 control group children and their caregivers were assesses at baseline and 57 at end-line.

Assessment data analyzed to determine whether the end-line achieved percentage means scores of ECD domain outcomes of two groups (intervention and control groups) are statistically different from the baseline.

Findings

The results at end-line and baseline showed that after one intervention *Anchal* children's ECD aptitudes improvement were significantly better than those children did not have access to any ECD care services. However, the intervention group children demonstrated lower competency in the socio-emotional domain at end-line.

The self-reported caregivers' data revealed that children were mainly taking care of by their mothers. Mothers were more educated than their fathers. Caregivers' data also demonstrated that children had adequate numbers of home learning materials such as storybooks, toys, and other learning materials. Compared to control children, intervention children had a more positive home learning activities at home. Both groups of children's caregivers acknowledged that they practiced negative behavior management reinforcement at a higher rate at home besides showing positive behavior management techniques.

No major limitations identified to conduct the study. However, we purposefully assign the intervention areas for the nature of the study design, but the control areas were selected randomly. Only few cases children were distracted by the crowd which could have minor impact on how the children responded.

Conclusion

The evidence of the *Ancha*l impact assessment suggested that the *Anchal* ECD intervention is effective in improving children early development and learning skills. Intervention group children's ECD competency was significantly higher than their counter group. The findings demonstrated that the *Anchal* services would be scalable intervention to increase children access to essential ECD services in rural communities.

What more, emphasizing on parents engagement and caregiving skills development in the future intervention could be highly beneficial to children ECD outcomes improvements and program impact.

1. Introduction

2.1. Background

This study report is to reflect on the *Anchals* intervention's outcomes improving early development and learning through the provision of developmentally appropriate ECD intervention. Drowning is an epidemic and one of the top causes of child mortality worldwide. In response to child drowning epidemic in Bangladesh, Center for Injury Prevention and Research Bangladesh (CIPRB) and Royal National Lifeboat Institution (RNLI) formed a partnership to prevent drowning in remote communities in Bangladesh in 2016.

Since 2016, under the project named BHASA, a comprehensive drowning reduction project, 400 ECD centers (*Anchal)* provided supervision and ECD care services to more than 10,000 children 1 to 5 years yearly to protect them from drowning in three upazilas of the Barishal division. The previous studies of CIPRB identified that 'supervision of children through *Anchal* was effective in preventing drowning' (Rahman *et al.*, 2012). However, the impact of *Anchal* ECD intervention on children was not explored before. Hence, the project BHASA designed and undertook a baseline and endline study to assess the outcomes of ECD services that help children to improve their early learning aptitudes.

This study evidence was critical to scaling up the sustainable *Anchals* ECD intervention services in other districts of Bangladesh. Intervention that is proven to be effective is crucial to make affordable ECD and drowning prevention supervision services available to marginal children across Bangladesh as well as in similar context worldwide. Also, the evidence-based data will be useful in improving the *Anchals* intervention service qualities.

2.2. Research Question

Can the *Anchals* Early Childhood Development Intervention improve early childhood development aptitudes of children attend in the *Anchals*?

2.3. General Objective

The general objective of this study was to measure the early childhood development outcomes of the *Anchals*' children attended *Anchal* services.

2.4. Specific Objectives

I. To identify the improved early development and learning skills achieved through ECD stimulations in the *Anchals*
II. To improve and implement the stimulations for advancing early development and learning skills of *Anchal* children
III. To measure improved early childhood development outcomes of children received *Anchal* supervision and ECD care services

2. Methodology

This section reflects on the study methodology applied in the baseline and endline studies.

3.1. Study Design

Randomized control trial design applied in both baseline and end-line study. The children of *Anchal* centers were used as intervention group and communities' children who were not exposed to any ECD services were participated as control group in the both studies. We used a cluster sampling method in the study.

3.2. Sampling Procedure

The participants were selected randomly at the end-line and the baseline. *Anchal* intervention centers and control areas selected purposefully for study interest. At the endline, 55 children were selected from 18 randomly selected *Anchals* from three intervention areas and 57 control group children also were selected from 18 different villages without *Anchals* through randomization. Those communities' children from villages who were unexposed to any ECD care services selected as the control group.

3.3. Study Participants

The participants of the study were children aged between 42 and 59 months and their caregivers from *Anchal* centers and communities. At the end line participants of intervention group were 55 and 53 at the baseline whereas control group participants at the endline were 57 and 51 at the baseline. The number of participants at endline was slightly higher than the baseline. Of the intervention group, 55 % of participants were girls and boys 46% whilst 47% of participants were girls and 37% boys in the control group. The distribution of program type and the sex of the participants showed in table 1.

Table 1: Overview of intervention and control groups both at end line and base-line by sex

Group	Boys (%)		Girls (%)		Total (%)	
	Baseline	Endline	Baseline	Endline	Baseline	Endine
Intervention	21 (39.6)	25 (45.5)	32 (60.4)	30 (54.5)	53 (100.0)	55 (100.0)
Control	21 (41.2)	30 (52.6)	30 (58.8)	27 (47.4)	51 (100.0)	57 (100.0)

3.4. Study Area

In both baseline and endline, intervention group's data collected from 18 *Anchal* centers, and 18 cluster communities selected for the control group from three Upazilas (Kalapara, Betagi, and Taltoli) in the Barishal division of southern Bangladesh. 18 clusters were selected from areas where children were unexposed to any ECD interventions to mitigate the influence of *Anchal* ECD intervention on the community children.

3.5. Data Collection

Data were collected by four data collectors from control and intervention field areas at baseline and endline. The duration of data collection was about 1 month. Before the data collection, data collectors participated in a six-days training. CIPRB's internationally trained master trainers provided theoretic and hands-on training to the data collectors on the use of Save the Children's assessment tool. The data collection process was closely monitored and supervised by our field area staffs.

An electronic data collection device was used to collect data to avoid data collection error in the field. The collected data were checked and provided feedback by the research team

regularly to ensure data accuracy. The assessment tool translated into formal Bangla language. The data collectors were instructed and trained to speak and explain in the local language when the encountered challenges in conducting the assessment with children.

3.6. Data Instrument

The same data collection tool The IDELA (International Development and Early Learning Assessment) was used for the baseline and endline study as an assessment tool. The instrument is a rigorous international assessment tool that measures children's early learning and development and developed by Save the Children (Save the Children, 2015). CIPRB also signed a memorandum of understanding (MoU) with the Save the Children IDELA team to use their tools in the study. This early learning and development assessment tool construct with a core of 22 items under the five development domains which include motor, cognitive, emotional, language and social development. The age range for using the IDELA tool is 3.5 to 6 years. The recommended administration time is 30 minutes. However, our data collection time was 40 to 45 minutes per child. A minimal set of approved materials are required for tool application. Some assessment questions required probing and integrated stop rules which allow insightfully responding to the questions by children with different ages and abilities. The subtasks and items used in IDELA are shown in Table 2.

Table*2*: IDELA Child Assessment Subtasks

Domain	Skills
Emergent Literacy	Print Awareness
	Oral Vocabulary
	Letter Identification
	Emergent Writing
	First Letter Sounds
	Oral Comprehension
Emergent Numeracy	Comparison by Size and Length
	Sorting and Classification
	Number Identification
	Shape Identification
	One-to-One Correspondence
	Addition and Subtraction

	Puzzle Completion
Social-Emotional Development	Friends
	Emotional Awareness
	Empathy
	Solving Conflict
	Self-Awareness
Motor Development	Copying a Shape
	Drawing a Person
	Folding Paper
	Hopping

3.7. Data Analysis

Four ECD domains such as Gross and Fine Motor Development, Emergent Literacy and Language, Emergent Numeracy, Social-emotional Development, Home Environment, Parenting Practices scores were accumulated using SPSS descriptive analysis. Then the percentage scores of ECD domains of intervention and control group were compared. Finally, we applied the independent sample t-test and determined the significance of differences of percentage means score for each domain to weigh the improvement of an individual group.

4. The results

4.1. Family Characteristics

i. Family Characteristics: Parents age

Among both parents, mothers were tended to be younger than their fathers at both baseline and endline. Of both group, on average age of the fathers 33 and mothers 27 years at baseline and at endline average age of fathers was 37 years and mothers 29 years.

Table 3: Family characteristics by parents' age

Parents age	Intervention group Mean age (±SD)		Control group Mean age (±SD	
	Baseline	Endline	Baseline	Endline

Mother Age	27.3 ±5.0	29.8 ±5.2	26.2 ±4.8	28.9 ±6.8
Father Age	33.5 ±6.8	37.1 ±6.7	32.2 ±5.1	36.5 ±8.0

ii. Family Characteristics: Parents education

The educational level of children's parents was stated in table 4. Most of the parents of both groups were well educated. The highest level of education of parents was primary education. More than 50% of mothers and fathers finished primary level education. For mothers and fathers of the intervention group, the percentage is 63.6, and 49.1, and for the control group, the percentages were 57.9 and 35.1 respectively. The second-largest education level of parents was secondary level education. So, the children's parents were fairly educated for the rural context. We observed the same level of education status for both of the groups' parents at baseline.

Table 4: Family Characteristics-parents education level at end-line

Parents education	Intervention group (%)		Control group (%)	
Mother Education	**Baseline**	**Endline**	**Baseline**	**Endline**
No institutional education	5.7	9.1	3.9	8.8
Pre-primary	1.9	5.5	9.8	5.3
Primary	56.6	63.6	51.0	57.9
Secondary	24.5	10.9	31.4	21.1
Higher Education	11.3	9.1	3.9	7.0
Total	100.0	100.0	100.0	100.0
Literate	90.6	83.6	90.2	80.7
Father Education				
No institutional education	11.3	23.6	7.8	31.6
Pre-primary	1.9	1.8	7.8	7.0
Primary	52.8	49.1	49.0	35.1
Secondary	22.6	12.7	19.6	12.3
Higher Education	11.3	12.7	13.7	14.0
Total	100.0	100.0	2.0	100.0
Literate	83.0	72.7	86.3	57.9

4.2. Home Learning Environments

I. Family possession

In the caregiver survey, caregivers also asked about the types of home possessions they have at homes. Research evidence showed that children from high-income family have more access to learning experiences, and support children development. The results described in table 5 reflected the status of home possessions that the families own. Both of the groups' families owned almost the same numbers of home possessions. All the families had mobile phones (100.0 %). More than 50% of families had electricity. Maximum numbers of families (Intervention group=70.9%, Control group=66.7%) of the two groups owned lands. The findings at baseline for home possessions demonstrated the similar trend for both intervention and control groups.

Table 5: Average home possession owned by family

Household possessions types	Intervention group (%)		Control group (%)	
	Baseline	Endline	Baseline	Endline
Television	20.8	20.0	17.6	42.1
Refrigerator	7.5	5.5	9.8	29.8
Bicycle	7.5	5.5	2.0	10.5
Motorcycle	5.7	5.5	7.8	10.5
Mobile Phone	100.0	100.0	96.1	100.0
Electricity	84.9	54.5	46.0	68.4
Land	62.3	70.9	66.0	66.7

II. Home reading materials

Data presented in table 6 reflected the verities of children's reading materials that they have at home for improving literacy skills. It was evident from the caregivers 'self-reported data that a large number of children (intervention=80.0%, control=73.7%) had access to religious books at their home. Only few children had magazine (intervention=1.8%, control=7.3%) and newspapers (intervention=7.3%, control=3.5%) at home. Caregivers also asked to respond on the types of reading materials such as storybooks, comics, magazines they own at home. The home learning items looked sufficiently available at the children's house. Our baseline data showed that both of the groups had a slightly higher number of reading materials at home.

Table 6: Types of Reading materials available at home

Types of Reading materials	Intervention group (%)	Control group (%)

	Baseline	Endline	Baseline	Endline
Story/Picture book	69.8	49.1	60.8	45.6
Textbook	81.1	76.4	74.5	50.9
Magazine	9.4	1.8	9.8	1.8
Newspaper	17.0	7.3	7.8	3.5
Religious	69.8	80.0	64.7	73.7
Coloring	24.5	14.5	15.7	15.8
Comics	9.4	3.6	3.9	8.8

III. Home play materials

Table 7 showed that no major difference was found between the two groups families owned play materials that children can use for home learning. The highest numbers of families of both groups reported to owning manufactured toys (Intervention=94.5%, Control=96.5%), household objects (Intervention=87.3, Control=87.7), outside objects (Intervention=81.8%, Control=93.0%), and homemade toys (Intervention=65.5%, Control=61.2%). Families reported having significantly low numbers of puzzles which can help children's to improve cognitive skills at home. The baseline data regarding home learning materials also showed that both of the groups owned almost the same numbers of learning materials at home.

Table 7: Types of Play Materials at home

Types of Play Materials	Intervention group (%)		Control group (%)	
	Baseline	Endline	Baseline	Endline
Homemade toys	92.5	65.5	78.4	61.4
Manufactured toys	90.6	94.5	90.2	96.5
Household objects	75.5	87.3	92.2	87.7
Object found outside	94.3	81.8	94.1	93.0
Drawing/writing materials	57.7	49.1	56.9	50.9
Puzzle	7.5	1.8	27.5	5.3
Hand-eye coordination	45.3	49.1	62.7	52.6
Color/shape	22.6	16.4	25.5	8.8
Counting	30.2	45.5	31.4	21.1

IV. Home learning activities

The caregivers also asked about the types of home learning activities that caregivers did with children at home (table 8). The children and caregivers interactions while doing home learning

activities appeared to being higher among the intervention group. The study result showed that learning activities, such as reading, storytelling, doing rhymes, teaching alphabets are highest-rated learning activities that caregivers did with children of both groups. Caregivers' self-reported data of the both groups at the baseline indicated that more than 50% families were engaged in learning activities with children at home.

Table 8: Types of learning activities at home

Home learning activities	Intervention group (%)		Control group (%)	
	Baseline	Endline	Baseline	Endline
Reading/showing picture books	69.8	72.7	62.7	56.1
Storytelling	58.5	85.5	47.1	71.9
Rhymes	54.7	58.2	62.7	50.9
Take outside/ relatives/shopping	47.2	29.1	68.6	29.8
Playing an easy game	35.8	21.8	39.2	36.8
Teaching object name/drawing	24.5	23.6	23.5	19.3
Teaching new things	41.5	45.5	27.5	31.6
Teaching alphabets	81.1	63.6	66.7	61.4
Spending time	58.5	36.4	41.2	36.8
Playing counting game	47.2	49.1	45.1	47.4

V. Caregivers' relationship and home discipline practice

Although, caregivers from both groups were used positive behavior management practices at a greater rate, yet the highest numbers of negative child discipline practices were also self-reported by the caregivers at the baseline and endline. It was also reported that the mothers were mainly played a more active role in taking care of their children's development need, as primary caregivers.

Table 9: Types of behavior management practices at home by study groups

Behavior management practices	Intervention group (%)		Control group (%)	
	Baseline	Endline	Baseline	Endline
Showing love/Affection	96.2	94.5	90.2	98.2
Pushed/spank for negative behavior	47.2	34.5	52.9	26.3
Physically Hit	49.1	36.4	68.6	42.1

Criticized or shouted	43.4	40.0	72.5	56.1

Table 10: Caregivers relationship with child

Caregivers relationship	Intervention group (%)		Control group (%)	
	Baseline	Endline	Baseline	Endline
Mother	73.1	45.5	92.2	59.6
Father	0.0	1.8	0.0	3.5
Grant parents	13.5	5.5	5.9	12.3
Elder siblings	9.6	16.4	0.0	10.5
Other caregivers	3.8	30.9	2.0	14.0
Total	100.0	100.0	100.0	100.0

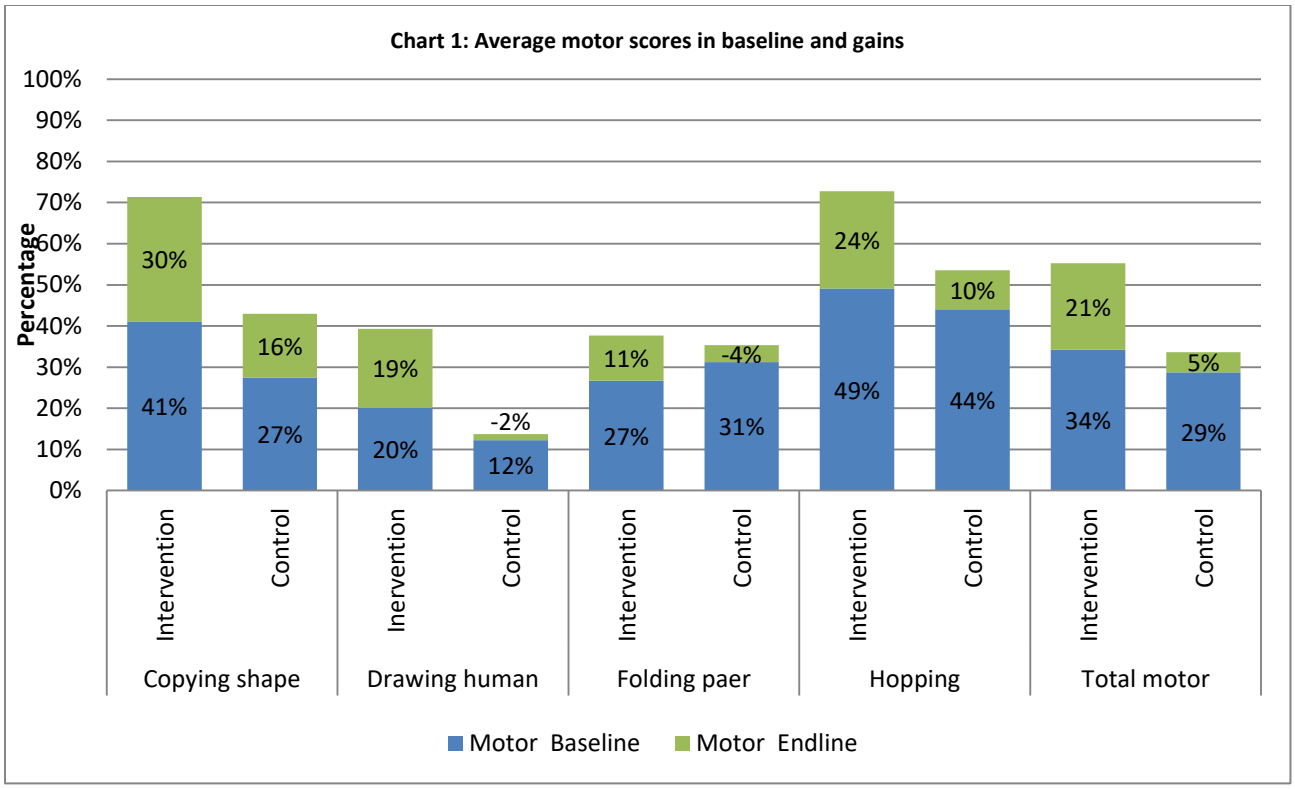
4.3. Children ECD Skills

I. Motor development

Overall, Intervention group children's gains in all skills areas of the motor domain were higher than the control group children. Both the intervention and control group children's achievement was the highest in the copying shape, and hopping skills areas (Intervention=30% and 23%; control=16%, 10%). The lowest gain of the intervention group was in the folding paper skill area (11%) whereas the control group had no gains in the human drawing, and Paper Folding skills areas (-1.5% and - 4.1).

Table 11: Motor scores in baseline and gains

Motor Skills	Intervention group (%)			Control group (%)		
	Baseline	End line	Gains	Baseline	Endline	Gains
Copying a shape	41.10	71.36	30.3	27.40	42.98	15.6
Drawing human	20.13	39.32	19.2	12.26	10.75	-1.5
Folding paper	26.69	37.73	11.0	31.25	27.19	-4.1
Hopping	49.15	72.73	23.6	44.04	53.51	9.5
Total motor	34.26	55.28	21.0	28.73	33.60	4.9



(Intervention n = 57, control n = 55)

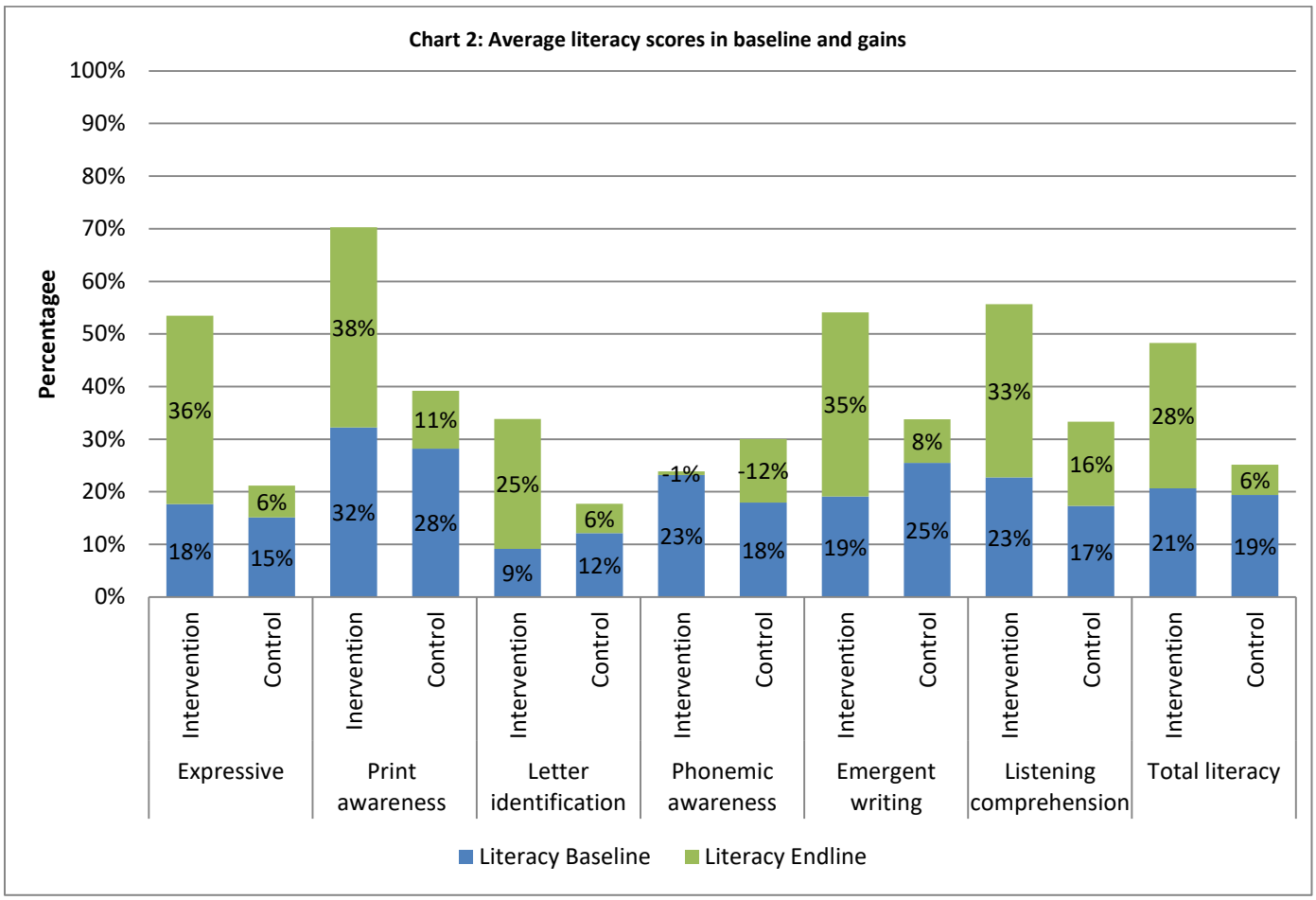
II. Early literacy development

Compared to the control group, progress of the intervention group was better in all the skill categories of the emergent literacy domain. Among all the literacy skills, intervention group children scored higher in print awareness skill category (38%) and the highest scores of the control group children were in comprehension listening skill (16.0%). It is apparent from the study data that children need to receive more ECD activities to improve their phonemic awareness skill in which children's performance was comparatively poor (intervention=-0.74%, control=-12%) (Table: 12).

Table 12: Literacy scores in baseline and gains

Literacy skills	Intervention (%)			Control (%)		
	Baseline	Endline	Gains	Baseline	Endline	Gains
Expressive vocabulary	17.6	53.5	35.8	15.1	21.1	6.0
Print awareness	32.2	70.3	38.1	28.2	39.2	11.0

Letter Identification	9.15	33.8	24.7	12.1	17.7	5.6
Phonemic awareness	23.2	22.4	-0.7	18.0	5.9	-12.1
Emergent writing	19.1	54.1	35.0	25.5	33.8	8.3
Listening comprehension	22.7	55.6	32.9	17.3	33.3	16.0
Total literacy	20.7	48.3	27.6	19.4	25.2	5.8



(Intervention n = 57, control n = 55)

III. Early numeracy development

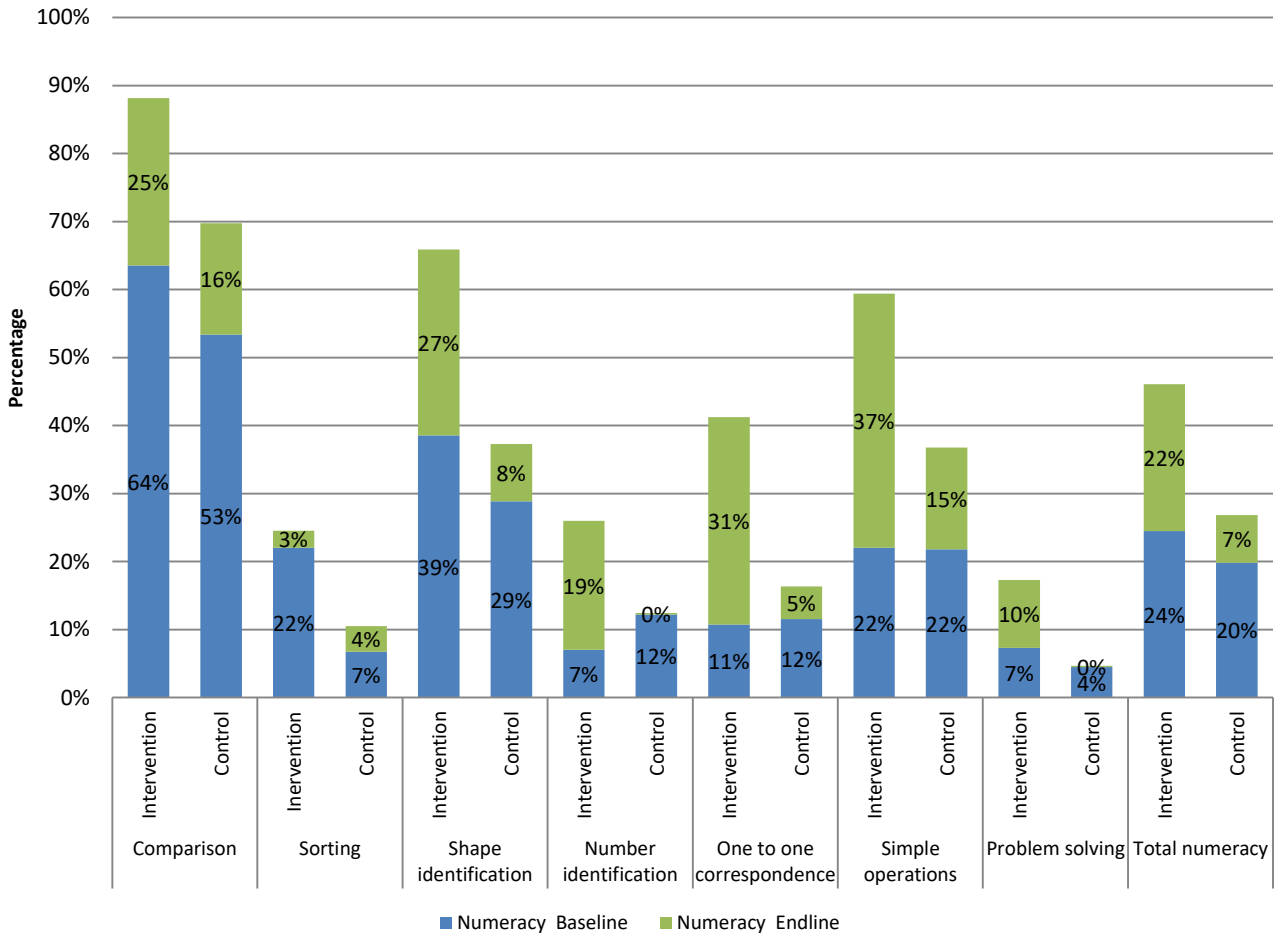
Children who received Anchal ECD services attained higher scores in emergent numeracy skills areas (Table 13). On the other hand, compared to intervention children, the control group children showed little progress in the emergent numeracy skills areas. The highest improvement of the intervention group children appeared to be in simple operation skill (37%) and the lowest gain was in Classification skill area (3%). The control group children's progress

was better in Measurement and comparison skill areas (16%). Children from the control group showed little or no progress in most of the skill areas of numeracy domain.

Table 13: Numeracy scores in by study groups

Numeracy skills	Intervention (%)			Control (%)		
	Baseline	Endline	Gains	Baseline	Endline	Gains
Measurement & comparison	63.6	88.2	24.6	53.4	69.7	16.4
Classification/sorting	22.0	24.6	2.5	6.7	10.5	3.8
Shape identification	38.6	65.9	27.4	28.9	37.3	8.4
Number identification	7.0	26.0	19.0	12.2	12.5	0.3
One-to-one correspondence	10.7	41.2	30.5	11.5	16.4	4.8
Simple operations	22.0	59.4	37.4	21.8	36.8	15.1
problem solving	7.3	17.3	9.9	4.5	4.7	0.2
Total numeracy	24.5	46.7	21.6	19.9	26.8	7.0

Chart 3: Average numeracy scores in baseline and Gains



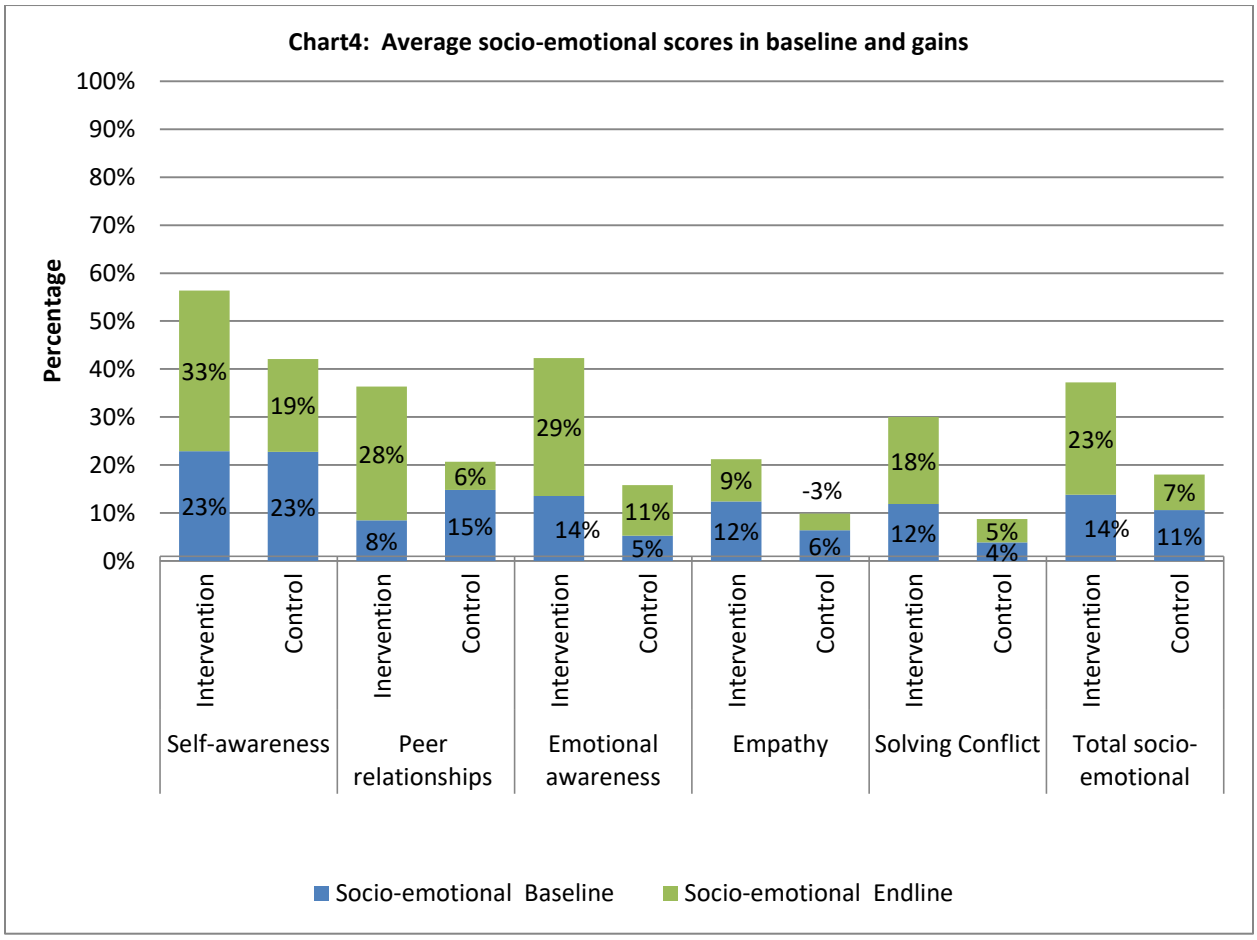
(Intervention n = 57, control n = 55)

IV. Socio-emotional development

In the emotional domain e, the intervention group children progress outperformed the control group children's gains in all the areas of socio-emotional domain. Particularly, intervention group children showed sharp progress in self-awareness, peer relationships, emotional awareness, and conflict solving skill areas (33%, 27%, 29% and 180%) whereas control group children toped in self-awareness area (19%) only and showed no progress in empathy skill (Table 14). Overall, the progress of control group children in the socio-emotional domain was slow.

Table 14: Socio-emotional scores in baseline and endline by study groups

Socio-emotional domain	Intervention (%)			Control (%)		
	Baseline	Endline	Gains	Baseline	Endline	Gains
Self-awareness	22.9	56.4	33.9	22.8	42.1	19.4
Peer relationships	8.5	36.4	27.9	14.8	20.7	5.9
Emotional awareness &regulation	13.6	42.3	28.7	5.3	15.8	10.5
Empathy	12.4	21.1	8.8	6.4	2.9	-3.5
Solving Conflict	11.9	30.0	18.1	3.9	8.8	4.9
Total socio-emotional	13.8	37.2	23.4	10.6	18.1	7.4



(Intervention n = 57, control n = 55)

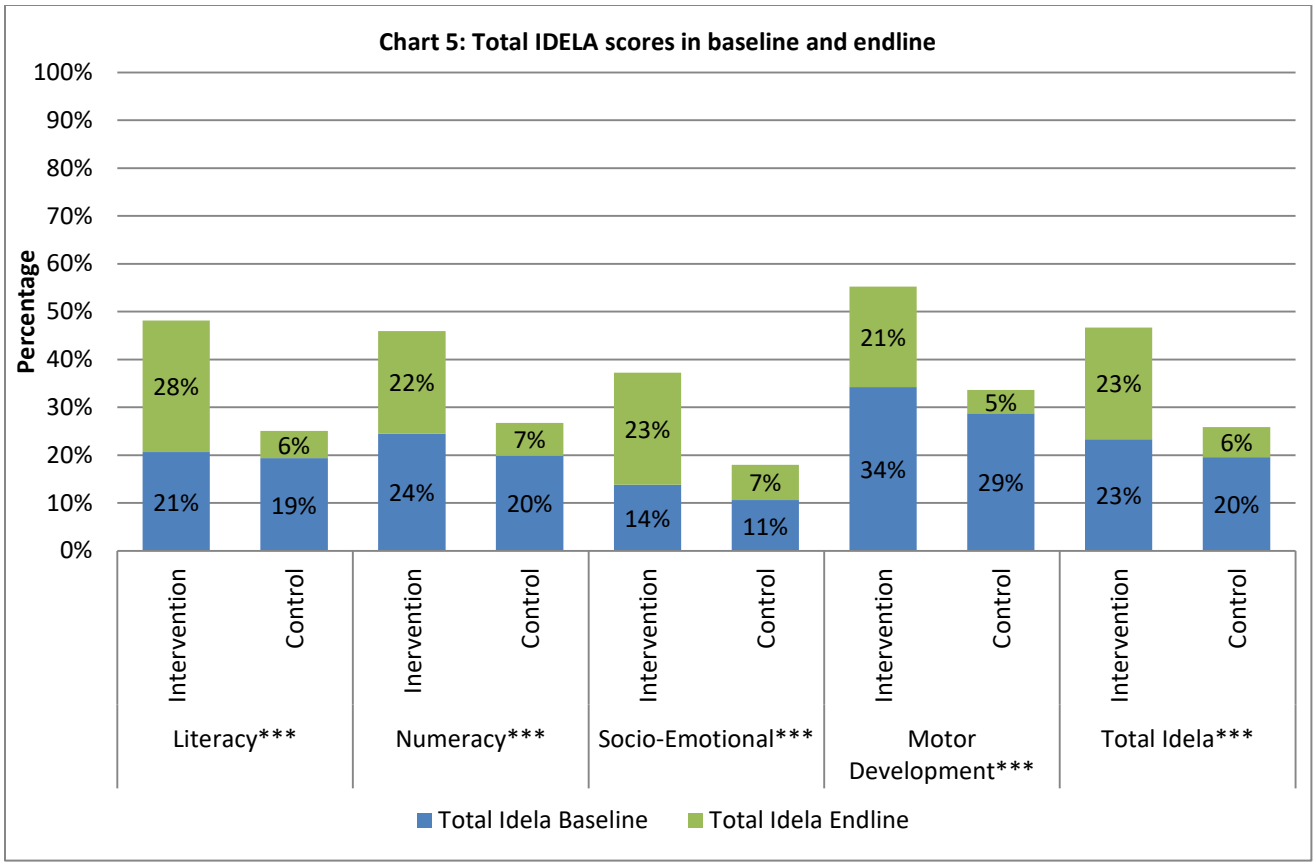
V. Total early development

However, the overall result indicated the intervention children demonstrated the strongest progress in all the ECD domains. On average, achieved scores of intervention children were

significantly better (28%, 22%, 23% and 21%) in all four ECD domains (Literacy, Numeracy, Socio-Emotional, and Motor) compared to control group children (control=6%, 7%, 7%, and 5%). The total IDELA gains also appeared to be higher among the intervention group children (Intervention=23%, and Control=-6%).

Table 15: Total IDELA domain scores by interventions

IDELA domains	Intervention (%)			Control (%)			Significant mean percentage diff
	Baseline	Endline	Mean diff/Gains	Baseline	Endline	Mean diff/Gains	
Emergent literacy	20.7	48.3	27.5	19.4	25.2	5.7	0.00
Emergent numeracy	24.8	46.1	21.5	19.9	26.8	6.9	0.00
Socio-emotional Dev	13.8	37.2	23.4	10.6	18.1	7.38	0.00
Motor development	34.3	55.9	21.0	28.7	33.6	4.9	0.00
Total IDELA	23.3	46.7	23.4	19.6	25.9	6.3	0.00



*(Intervention n = 57, control n = 55) *** p<0.001, ** p<0.01, * p<0.05, ~ p<.1*

As revealed in the chart 5, intervention group children's showed significantly better and notable improvement than their counter group in the most skills areas of Motor, Literacy, Numeracy and Socio-emotional domain. Each of the domain gains of intervention children tested against the control group children's domain gains and all of the domains gains was proven statically significant ($p<0.001$). Although children progress in Motor domain was relatively low, overall, intervention children achieved significantly higher IDELA scores than the control group children.

5.Strengths and limitations

5.1 Strengths

We collected data using an electronic device and RedCape software in order to authenticate the data collection process and ensure data transparency. A central data monitoring team collectively worked to improve data quality by providing feedback to enumerators regularly. A

minor constrain of the study is that the language used for assessing the child. We collected data using formal Bangla language in the questionnaire rather than the local language of Barishal Division. This might have slightly impacted children responses and achieved scores. Data collectors were trained and certified by the Save the Children's certified master trainers to ensure that the data collectors were competent. Every child and their caregivers participated willingly in the study.

5.2 Limitations

The study was designed to be rigorous. Hence, we applied the Random Controlled Trial (RCT) model; but we could not ensure applying standardized random assignments in the study for the research interest. 100 children purposefully selected from pre-selected non-functioning 150 *Anchals,* but the children were selected randomly from each *Anchal.* We did not have any significant limitations on the studies which might have an impact on the quality of the study.

6.Conclusion and Recommendations

6.1 Conclusion

The RCT was conducted to measure the improved ECD outcomes of children who received supervision and ECD intervention services for drowning prevention in three areas of southern Bangladesh. Overall, the study indicated that our intervention children's progress in all ECD domains were statistically significant than those children who never had access to any ECD care services. *Anchal* children showed significant progress in all the ECD domains at a greater level. On the contrary, control group children were unable to demonstrate distinguishable progress to their ECD outcomes due to not having access to any ECD services. We can conclude that the *Ancha*l ECD care services helped children improving their early learning and development outcomes. These results indicated that scaling up the *Anchal* program would significantly increase the opportunity of access to ECD care and drowning reduction supervision services for the rural communities who are deprived of receiving these services essential to the children.

Large numbers of caregivers' self-reported data from baseline and end-line exhibited that the main caregivers of both groups' children were the mothers. For both intervention and control group groups, mothers' education level was higher than their fathers. The study also showed that children had adequate numbers of learning materials available at home. Both of the study groups owned almost equal numbers of home possessions. Learning materials are essential tools for stimulating home environments and enriching children's learning experience and development at home. Caregivers also noted that the intervention group children were more engaged in positive home learning experience than the control group. However, our results did not show any notable improvement in children home learning environments and home caregiving practices since the *Anchal* intervention does not emphasis on ECD focused engagement programme for parents.

6.2 Recommendations

Although the study suggested that *Anchal* ECD services were effective in improving children Early Childhood Development outcomes, the findings also indicated some areas where the future intervention should emphasis more to improve *Anchal* children's learning outcomes. It appeared that among all the development domains the Motor and socio-emotional domain outcomes of intervention children were comparatively low. Hence, in the next intervention, new range of children activities should be designed and delivered that enhance children' motor, and socio-emotional skills.

Mothers played more central roles as main caregivers for children developments that were consistently demonstrated in our baseline, end-line results. Parents' engagements program in the future intervention needs to ensure the active engagements of both parents in their child development activities. Lower parents' engagement in their child learning activities will increase the chances of lower development and learning outcomes.

We also observed that negative behavior management practices among child families were consistently higher. So, in future intervention, emphasis must be given to the parents' engagement program where parents and caregivers will be aware of the negative discipline

practices' impact on child development. Both caregivers also should receive training on positive behavior management practices.

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