

Completion Report 2021

Annual Assessment of Pashe Achhi on Caregivers', Children's and Facilitators' Outcomes in Camp

Background

BRAC has been implementing Humanitarian Play Lab (HPL) for 0-6 years Rohingya children to provide a safe and stimulating space for displaced and vulnerable children of Myanmar under PtL project. Starting from September 2018, the HPL model is focusing on three age groups: 0-2, 2-4, and 4-6, where Home-based HPL is being implemented for 0-2 and 2-4 age groups, and Center-based HPL is being implemented for 2-4 and 4-6 age groups.

In March 2020, after confirming the coronavirus cases in Bangladesh, HPLs temporarily closed their face-to-face operations according to the government mandate. Hence BRAC explored alternative approaches and came up with and designed a telecommunication model Pashe Achhi to support all the direct beneficiaries during the pandemic. Pashe Achhi is a telecommunication model consisting of a tele-counseling component and a telelearning component. After receiving the training, the facilitators started to call the families every week to conduct a 20 minutes phone session (10 minutes with the Caregiver and 10 minutes with the child) based on the scripts delivered. In the first 10 minutes, Play Leaders give caregivers basic psychosocial support, tips on engaging with children and discussing health and hygiene issues. Then the Play Leaders engage the children with age-appropriate activities, such as traditional rhymes called “Kabbiyas” and stories for the HPL children. The session ends up with a wrap-up conversation with the Caregivers’.

Yet, after the fire incident in the Rohingya Camps on 22 March, 2021, all the calls were halted and the emergence of instant face to face Psychological First Aid (PFA) arose. Immediately, the facilitators started visiting the beneficiaries, both in the fire affected camps as well as the rest of the camps, disseminating messages through home visits around fire safety, psychosocial support, play and COVID-19 prevention. The interventions in the other camps were necessary as well, because the people who lost their homes or got separated from their families, took shelter at their relatives’ living in other camps. In addition, material distribution was initiated which included – play materials, biscuits and drawing materials (pencil, eraser, sharpener and crayons) and co-created storybooks for the children. From November the intervention was resumed as Pashe Achhi home visit. During these period, series of capacity development trainings and workshops were also conducted for the frontliners and other project staff.

Objective

The overall objective of the implementation study was to examine the progress of the caregivers’, children’s and facilitators’ outcomes in the Rohingya camp.

Methodology

This implementation study followed the intervention group only, pretest-posttest design with three intervention groups named 2-6 center based, 0-2 home-based and 2-4 home-based. A total of 480 caregiver-child dyads were selected randomly as sample for this study, where 120 caregiver-child dyads were from 0-2 home based, 120 caregiver-child dyads were from 2-4 home-based and 240 caregiver-child dyads were from 2-6 center-based. In addition, a total of 395 facilitators were taken as sample from three age groups in this study. Ages and stages Questionnaire (ASQ:3), Ages and Stages Questionnaire: Social-Emotional (ASQ:SE-2) were used for measuring children’s outcomes. For caregiver’s outcomes KAP, PHQ-9, MAI and CPRS were used. MAI and CPRS were used to measure caregiver-child relationship for 0-2 and 2-6 cohorts respectively. The baseline and endline data were collected in April-May 2021 and December 2021-January 2022, respectively. At baseline data was collected using telecommunication modality and at endline through in- person modality. A total of 131 caregiver-child dyads could not be reached at endline due to families’ migration to Bhashanchor and other areas as well as not having the access permission to camp. Hence for comparing the outcomes between baseline and endline, analyses were carried out on the matched sample of baseline and endline. To understand the status of outcomes, percentage were carried out. In addition, paired sample t-test was run to understand the findings better.

Findings

Demographic Characteristics of Children and Families

Table 1 exhibits the demographic characteristics of children and their families at the baseline. findings show, mother's mean age was 27.44 years for 2-6 center based, 25.29 years for 0-2 home based, and 28.16 years for 2-4 home based. Table 1 also shows, father's mean age was found 33.61 years for 2-6 center based, 30.53 years for 0-2 home based, and 32.70 years for 2-4 home based,. On the other hand, educational qualification of mothers shows that 85.5% , 93.2% and 83.6% were in below class 5, for 2-6 center based, 0-2 home based and 2-4 home based respectively. Similarly, 72.7%, 91% , and 67.1% of fathers were in below class 5 in 2-6 center based, 0-2 home based and 2-4 home based respectively. Findings also reveal most of the mothers were housewife and fathers were day labor. Most of the children lived in single family and number of their family member were 1 to 12. The mean score of the family income in a month was 5865.67 taka for 2-6 center based, 5258.62 taka for 0 -2 home based, and 5344.26 taka for 2-4 home based.

Table 1: Demographic Characteristics of 0 to 6 Years Children and Families at Baseline

Variables	Mean±SD/Percentages/Range		
	2-6 C	0-2 H	2-4 H
Mother's Age in Years	27.44±5.39	25.29±5.69	28.16±4.95
Mother's Education (below class 5)	85.5%	93.2%	83.6%
Mother's Occupation (Housewife)	93.5%	94.3%	95.1%
Father's Age in Years	33.61±8.30	30.53±7.68	32.70±5.68
Father's Education (below class 5)	72.7%	91%	67.1%
Father's Occupation (Day Labor)	66.7%	59.8%	70.5%
Family Type (Single)	89.1%	96.6%	82%
Family Member	6 (2-12)	5(1-12)	6(3-12)
Monthly Family Income	5865.67± 5445.5	5258.62± 5495.14	5344.26± 3443.03

2-6 Center Based HPL

Caregivers' Outcome

Table 2 exhibits the distribution of caregiver's outcome changes according to the indicators of the RBF (Result Based Framework). Therefore changes (mean differences) in outcomes, from endline to baseline was categorized in improved, stable (no change, indicating the difference between the baseline and endline was 0) and declined. Then the percentage was calculated to understand the outcome status of the intervention. For 2 to 6 age cohort, 38.3% parent's understanding on ECD knowledge was improved from baseline to endline, while 31.8% parents were steady. Similarly, in terms of caregivers' attitude towards gender equity and supportive interaction with their children, 36.8% and 32.3% parents improved, while 17.9% and 8% parents were stable on their status, respectively. Regarding caregivers' self-care practices, although only 1.5% caregivers improved their self-care practices, 45.8% caregivers' hold their status at the endline.

Caregiver's mental wellbeing was assessed by PHQ-9 and the analysis reveals that 30.8% caregivers improved their mental wellbeing and 18.9% caregivers remained steady in their status. Likewise, CPRS analysis demonstrates that 28.4% caregivers reported improved parent-child relationship, whereas 2.5% parents were stable in their parent-child relationship. Similar results found for the caregivers of 2 to 4 center based and 4 to 6 centers based (See Annex, Table 8,12)

Table 2: Distribution of Changes in Caregivers' Outcomes from Baseline to Endline for 2 to 6 Center Based (Percentage)

Outcomes	2-6 Center Based		
	Improved	Stable	Declined
ECD Knowledge	38.3	31.8	29.9
Attitude towards Gender Equity	36.8	17.9	45.3
Supportive Interaction	32.3	8.0	59.7
Self-Care Practices	1.5	45.8	52.7
Mental Wellbeing (PHQ-9)	30.8	18.9	50.2
Parent-Child Relationship (CPRS)	28.4	2.5	69.1

In addition, to gain some insights about the effects of the intervention, a paired sample t-test was used to compare the baseline and endline scores of parent's knowledge, attitude and practices as well as caregivers' mental wellbeing for better understanding. Table 3 demonstrates that the mean score of caregivers' knowledge about ECD improved from 3.13 (0.49) to 3.33 (1.37) from baseline to endline ($p < .05$). Similarly, the mean (SD) score for caregivers' attitude towards gender equity increased by .02985 points at the endline {baseline vs. endline: 3.5 (2.11) vs. 3.54 (1.89)}. However, caregivers' supportive interactions with their children significantly reduced 16.24 (2.43) to 14.29 (3.61) from baseline to endline ($p < .01$). Likewise, the mean score of caregivers' self-care practices significantly reduced and the significance level was .01. On the other hand, the mean score of PHQ-9 total in the baseline was 2.07 (2.54) and in the endline the score increased by 0.677 points, with an effect size of $d = 0.178$. Likewise, the mean score of total CPRS decreased by 7.18 points from baseline to endline (baseline vs. endline: 101.72 vs. 94.54, $t = -7.87$, $p < .001$, $d = -.55$). Same trends were discovered by further analysis for the caregivers of 2 to 4 center based and 4 to 6 centers based (See Annex, Table 9,13).

Table 3: Comparison of Caregivers' Outcomes at Baseline and Endline for 2 to 6 Center Based (Mean)

Outcomes	Baseline (N=201)	Endline (N=201)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	3.13± 0.49	3.33± 1.37	0.204	2.102	.037	0.148
Attitude towards Gender Equity	3.51± 2.11	3.54± 1.89	.02985	.168	.867	0.013
Supportive Interaction	16.24± 2.43	14.29± 3.61	-1.945	-6.347	.000	-0.448
Self-Care Practices	1.97±0.18	1.45± 0.50	-.512	-13.703	.000	-0.967
Mental Wellbeing (PHQ-9)	2.07± 2.54	2.75± 3.06	0.677	2.524	.012	0.178
Parent-Child Relationship (CPRS)	101.72± 7.33	94.54± 10.72	-7.18	-7.87	.000	-.55

Facilitators' Outcome

Table 4 displays the percentage of Play Leaders after calculating the difference from endline to baseline in their knowledge of early childhood development as well as mental wellbeing (according to Result Based Framework). For 2 to 6 age cohort, 38.8% Play Leader's understanding on ECD knowledge was improved, while 44.3% Play Leaders were steady.

In this study Play Leaders' mental wellbeing was also evaluated and the PHQ-9 analysis shows that that 47.7% Play Leaders improved their mental wellbeing and 17.7% remained stable at the endline.

Table 4: Distribution of Changes in Facilitators' Outcomes from Baseline to Endline for 2 to 6 Center Based (Percentage)

Outcomes	2-6 Center Based		
	Improved	Stable	Declined
ECD knowledge	38.8	44.3	16.9
Mental Wellbeing (PHQ-9)	47.7	17.7	34.6

Moreover, a paired sample t-test reveals that the mean score of Play Leaders' knowledge at the baseline was 9.22 (2.33) and at the endline was 9.59 (1.87), indicating an improvement after the intervention (Table 5). On the other hand, the mean scores of facilitators' mental wellbeing decreased by .61 points at the endline (baseline vs. endline: 2.97 vs. 2.36, $t=-2.49$, $p<.05$, $d=-.16$).

Table 5: Comparison of Facilitators' Outcomes at the Baseline and Endline for 2-6 Center Based HPL

Outcomes	Baseline (N=237)	Endline (N=237)	Mean Difference (Endline-Baseline)	t	p	Effect size, d
ECD Knowledge	9.22±2.33	9.59±1.87	.37	2.59	.01	.17
Mental Wellbeing (PHQ-9)	2.97±3.16	2.36±2.95	-.61	-2.49	.01	-.16

Children's Developmental Outcome

Table 6 demonstrates the percentage of children after calculating the difference from endline to baseline for respected indicators (according to Result Based Framework). For the 2 to 6 age cohort, 41.3% children's communication improved, while 26.4% children were steady. Similarly, in terms of gross motor, fine motor, problem solving and personal social skills, 57.7%, 47.8%, 28.9% and 57.2% children improved, whereas 21.9%, 10.9%, 12.4% and 15.4% were stable on their status, respectively. Regarding total ASQ, as a whole, 50.7% children improved and 3.5% remained stable at the endline.

On the other hand, for socio-emotional skill, the result reveals that 59.2% children improved in socio-emotional skill and only 0.5% children were stable in their status at the endline. Same trend was observed for the children of 2 to 4 center based and 4 to 6 center based by further analysis (See Annex, Table 10,14)

Table 6: Distribution of Changes in Children's Developmental Outcomes from Baseline to Endline for 2 to 6 Center Based (Percentage)

Outcomes	2-6 Center Based		
	Improved	Stable	Declined
Communication	41.3	26.4	32.3
Gross Motor	57.7	21.9	20.4
Fine Motor	47.8	10.9	41.3
Problem Solving	28.9	12.4	58.7
Personal Social	57.2	15.4	27.4
Total ASQ	50.7	3.5	45.8
ASQ-SE	59.2	0.5	40.3

In addition, to gain some insights about the intervention, a paired sample t-test was conducted to compare the baseline and endline scores of children's developmental outcomes. Table 7 illustrates the mean scores of children's developmental outcomes in various subscales at the baseline and endline.

More specifically, at baseline, communication, gross motor, fine motor, problem solving, and personal social mean scores were 53.16 (8.24), 47.84 (12.16), 39.35 (12.36), 47.51 (13.69), 47.21 (10.96), respectively. As the overall score of the ASQ-3 subscales ranges from 0 to 60, these numbers imply that children had a higher level of proficiency in all subscales of skills at baseline. On the other hand, children scored 54.33 (8.45), 54.15 (9.49), 39.35 (14.98), 41.29 (14.09), and 52.56 (9.59) in communication, gross motor, fine motor, problem solving, and personal social subscales, respectively, at the endline, suggesting slightly higher scores compared to baseline, except problem solving sub scale. From baseline through the end of the study, the mean ASQ total score raised from 235.07 (42.57) to 241.69 (40.15) from baseline to endline. Children scored 1.84 (1.03) and 1.43 (0.87) at the baseline and endline, respectively, in socio-emotional skills, showing that they had a better level of abilities as a lower score implies a higher degree of socio-emotional skills. With an effect size of $d = -0.32$, the results also reveal an improvement from baseline to endline. A further analysis shows similar findings for the children of 2 to 4 center based and 4 to 6 center based (See Annex, Table 11,15).

Table 7: Comparison of Children's Development Outcomes at the Baseline and Endline for 2-6 Center Based HPL (Mean)

Outcomes	Baseline (N=201)	Endline (N=201)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
Communication	53.16± 8.24	54.33± 8.45	1.17	1.44	.153	0.102
Gross Motor	47.84± 12.16	54.15± 9.49	6.32	5.84	0	0.412
Fine Motor	39.35± 12.36	39.35± 14.98	0	0	1	0
Problem Solving	47.51± 13.69	41.29± 14.09	-6.22	-5.36	0	-0.378
Personal Social	47.21± 10.96	52.56± 9.59	5.35	5.84	0	0.412
Total ASQ	235.07± 42.57	241.69± 40.15	6.62	1.94	.054	0.137
ASQ-SE	1.84± 1.03	1.43± 0.87	-0.42	-4.54	0	-0.32

0-2 Home Based HPL

Caregivers' Outcome

Table 16 exhibits the percentage of parents after calculating the difference from endline to baseline for respected indicators (according to Result Based Framework). For 0 to 2 home based, 73.6% caregivers understanding on ECD knowledge was improved, while 19.5% caregivers were steady. Similarly, in terms caregivers' supportive interaction with their children and attitude towards gender equity, 60.9% and 44.8% caregivers improved, while 6.9% and 32.2% caregivers were stable on their status, respectively. Regarding caregivers' self-care practices, although only 1.1% caregivers' improved their self-care practices, 97.7% caregivers' hold their status at the endline. Likewise, caregivers' mental wellbeing was assessed using PHQ-9 and according to Result Based Framework, it was found that 65.5% caregivers' improved their mental wellbeing and 9.2% caregivers' remained steady at the endline. For 0 to 2 Home based, caregiver-child attachment was assessed using MAI questionnaire. According to Result Based Framework, 66.7% caregivers' reported that their caregiver-child attachment improved, whereas 4.6% remained stable at the endline.

Table 16: Distribution of Changes in Caregivers' Outcomes from Baseline to Endline for 0 to 2 Home Based (Percentage)

Outcomes	0-2 Home Based		
	Improved	Stable	Declined
ECD Knowledge	73.6	19.5	6.9
Attitude towards Gender Equity	44.8	32.2	23.0
Supportive Interaction	60.9	6.9	32.2
Self-Care Practices	1.1	97.7	1.1
Mental Wellbeing (PHQ-9)	65.5	9.2	25.3
Parent-Child Relationship (MAI)	66.7	4.6	28.7

A paired sample t-test was used to compare the baseline and endline scores of parent knowledge, attitude, and practices for a better understanding. Table 17 demonstrates that from baseline to endline, the mean score of caregivers' knowledge about ECD improved considerably from 3.11(.65) to 4.48(1.23) ($p < .001$). However, the mean score of caregivers' attitude toward gender equity increased from baseline to endline, from 4.28 (2.01) to 5.18 (1.12), this was significantly improved ($p = 0.001$). Similarly, the mean score of caregivers support interaction improved from baseline to endline from 15.45 (2.16) to 16.64 (2.87), and the result was statistically significant ($p = .006$). The mean score of a caregivers' self-care practices, on the other hand, remained the same by the endline.

On the other hand, the mean scores of PHQ-9 total in the baseline was 4.3(3.10) and in the endline the score decreased by 2.48 points, with an effect size of $d = -.90$. Likewise mean score of caregiver-child attachment was 85.67 (5.71) at baseline and 88.10 (6.90) in the endline, with an effect size $d = .29$, which is statistically significant ($p < .01$).

Table 17: Comparison of Caregivers' Outcomes at the Baseline and Endline for 0-2 Home Based (Mean)

Outcomes	Baseline (N=87)	Endline (N=87)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	3.11± .65	4.48± 1.23	1.36	8.96	.000	.96
Attitude towards Gender Equity	4.28± 2.01	5.18± 1.12	.908	3.60	.001	.38
Supportive Interaction	15.45± 2.16	16.64± 2.87	1.19	2.81	.006	.30
Self-Care Practices	1.99± .107	1.99± .107	.000	.000	1.00	0
Mental Wellbeing (PHQ-9)	4.3± 3.10	1.82± 2.35	-2.48	-5.17	.000	-.90
Parent-Child Relationship (MAI)	85.67± 5.71	88.10± 6.90	2.43	2.71	.008	.29

Facilitators' Outcomes

Table 18 displays the percentage of facilitators (named as Mother Volunteers for home based) after calculating the difference from endline to baseline in their knowledge of early childhood development as well as mental wellbeing (according to Result Based Framework). It was found that for 0 to 2 home based, 71.8% Mother Volunteer's understanding on ECD knowledge was improved, while 23.1% Mother Volunteers were steady.

In this study Mother Volunteers' mental wellbeing was also evaluated and the PHQ-9 analysis shows that 71.8% Mother Volunteers improved their mental wellbeing and 15.4% remained stable at the endline.

Table 18: Distribution of Changes in Facilitators' Outcomes from Baseline to Endline for 0 to 2 Home Based (Percentage)

Outcomes	0-2 Home Based		
	Improved	Stable	Declined
ECD Knowledge	71.8	23.1	5.1
Mental Wellbeing (PHQ-9)	71.8	15.4	12.8

Furthermore, Table 19 manifests that the mean score of Mother Volunteers knowledge of early learning increased from baseline to endline by 2.00 points with an effect size, $d= 0.98$, which is statistically significant ($p<.01$). On the other hand, the mean scores of Mother Volunteers' mental wellbeing decreased by 3.18 points at the endline (baseline vs. endline: 5.49 vs. 2.31, $t=-4.19$, $p<.01$, $d=-.67$).

Table 19: Comparison of Facilitators' Outcomes at the Baseline and Endline for 0-2 Home Based HPL (Mean)

Outcomes	Baseline (N=39)	Endline (N=39)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	8.79± 1.949	10.79± 1.28	2.00	6.13	.00	0.98
Mental Wellbeing (PHQ-9)	5.49± 4.01	2.31± 2.79	-3.18	-4.19	.00	-.67

Children's Outcome

Table 20 demonstrates the percentage of children after calculating the difference from endline to baseline for respected indicators (according to Result Based Framework). For 0 to 2 home based, 74.7% children's communication improved, while 11.5% children were steady. Similarly, in terms of gross motor, fine motor, problem solving and personal social skills, 71.3%, 62.1%, 63.2% and 63.2% children improved, whereas 19.5%, 20.7%, 17.2% and 21.8% were stable on their status, respectively. Regarding total ASQ, as a whole, 80.5% children improved and 2.3% remained stable at the endline.

On the other hand, for socio-emotional skill, the result reveals that 57.5% children improved in socio-emotional skill and only 1.1% children remained stable and 41.4% declined at the endline.

Table 20: Distribution of Changes in Children's Developmental Outcomes from Baseline to Endline for 0 to 2 Home Based (Percentage)

Outcomes	0-2 Home Based		
	Improved	Stable	Declined
Communication	74.7	11.5	13.8
Gross Motor	71.3	19.5	9.2
Fine Motor	62.1	20.7	17.2
Problem Solving	63.2	17.2	19.5
Personal social	63.2	21.8	14.9
Total ASQ	80.5	2.3	17.2
ASQ-SE	57.5	1.1	41.4

Moreover, to gain some insights about the intervention, a paired sample t-test was also conducted to compare the baseline and endline scores of children's developmental outcomes. The findings indicate that children's developmental outcomes improved from baseline to endline (Table 21).

More specifically, at the baseline, children scored 46.21 (12.93), 47.70 (9.96), 48.68 (13.90), 49.48 (9.34), and 49.25 (9.69) in communication, gross motor, fine motor, problem solving, and personal social subscales, respectively. At the endline, children scored 55.75 (8.44), 57.87 (4.92), 55.92 (7.72), 54.77 (9.61), and 56.49 (5.60) in communication, gross motor, fine motor, problem solving, and personal social subscales, respectively. As a whole, the total ASQ score indicates an improvement by 39.48 point from baseline to endline, which is statistically significant ($p < .001$).

In socio-emotional skills, the result found that children were in a very good position since lower score in ASQ SE means socioemotional better skills. The mean score of this skill was found 2.02 and 1.72, respectively at the baseline and endline, while the total score of the measures was 10. Table shows that after the intervention, the mean score decreased by 0.29 points, which is statistically significant ($p < .05$), with an effect size of $d = -0.23$.

Table 21: Comparison of Children's Developmental Outcomes at the Baseline and Endline for 0-2 Home Based HPL (Mean)

Outcomes	Baseline (N=39)	Endline (N=39)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
Communication	46.21± 12.93	55.75± 8.44	9.54	5.88	.000	.63
Gross Motor	47.70± 9.96	57.87± 4.92	10.17	8.23	.000	.88
Fine Motor	48.68± 13.90	55.92± 7.72	7.24	4.36	.000	.46
Problem Solving	49.48± 9.34	54.77± 9.61	5.28	3.89	.000	.41
Personal Social	49.25± 9.69	56.49± 5.60	7.24	6.31	.000	.67
Total ASQ	241.32± 43.04	280.80± 28.37	39.48	7.39	.000	.79
ASQ-SE	2.02± 1.20	1.72± .67	-.29	-2.16	.034	-.23

2-4 Home Based HPL

Caregivers' Outcome

Table 22 exhibits the percentage of caregivers after calculating the difference from endline to baseline for respected indicators (according to Result Based Framework). For 2 to 4 home based, 16.4% caregivers understanding on ECD knowledge was improved, while 27.9% caregivers were steady. Similarly, in terms of caregivers' supportive interaction with their children and attitude towards gender equity, 29.5% and 6.6% caregivers improved, while 6.6% and 27.9% caregivers were stable on their status, respectively. Regarding caregivers' self-care practices, 13.1% caregivers improved their self-care practices, while 49.2% caregivers hold their status at the endline. Likewise, caregiver's mental wellbeing was assessed using PHQ-9 and following Result Based Framework, by calculating the difference from endline to baseline, it was found that 37.7% caregivers improved their mental wellbeing and 23% caregivers remained steady at the endline. Likewise, 63.9% caregivers reported improved caregivers-child relationship, whereas 6.6% caregivers were stable in their status.

Table 22: Distribution of Changes in Caregivers' Outcomes from Baseline to Endline for 2 to 4 Home Based (Percentage)

Outcomes	2-4 Home Based		
	Improved	Stable	Declined
ECD Knowledge	16.4	27.9	55.7
Attitude towards Gender Equity	6.6	27.9	65.6
Supportive Interaction	29.5	6.6	63.9
Self-Care Practices	13.1	49.2	37.7
Mental Wellbeing (PHQ-9)	37.7	23.0	39.3
Parent-Child Relationship (CPRS)	62.3	4.9	32.8

In addition, for better understanding, a paired sample t-test was conducted to compare the baseline and endline scores of caregiver's knowledge, attitude and practices. Table 23 shows that the mean score of caregivers' knowledge about ECD reduced from 4.21(1.34) to 3.57(1.30) from baseline to endline ($p < .01$). Similarly, in terms of attitudes, the mean score of caregiver's attitude toward gender equity decreased by 1.52 points in the endline (baseline vs endline: 5.21 vs 3.69). Moreover, regarding caregivers' practices, the mean score of caregivers support interaction with their children decreased from 16.05 (2.95) to 13.66 (3.31), and the mean score of caregivers' self-care practices reduced from 1.80 (0.40) to 1.54 (0.57) from baseline to endline. On the other hand, the mean score of PHQ-9 increased from 2.08 (2.05) to 2.92 (3.43) from baseline to endline. Similarly, the mean score of total CPRS increased significantly from baseline to endline (baseline vs. endline: 95.02 vs. 98.18, $t=2.26$, $p < .05$, $d=.29$).

Table 23: Comparison of Caregivers' Outcomes at the Baseline and Endline for 2-4 Home Based (Mean)

Outcomes	Baseline (N=61)	Endline (N=61)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	4.21± 1.34	3.57± 1.30	-0.64	-3.341	.001	-0.428
Attitude towards Gender Equity	5.21± 1.17	3.69± 1.84	-1.52	-7.176	.000	-0.919
Supportive Interaction	16.05± 2.95	13.66± 3.31	-2.39	-3.952	.000	-0.506
Self-Care Practices	1.80± 0.40	1.54± 0.57	-0.26	-2.907	.005	-0.372
Mental Wellbeing (PHQ-9)	2.08± 2.05	2.92± 3.43	0.84	1.553	.126	0.199
Parent-Child Relationship (CPRS)	95.02± 7.59	98.18± 8.53	3.15	2.26	.027	.29

Facilitators' Outcomes

Table 24 displays the percentage of Mother Volunteers after calculating the difference from endline to baseline in their knowledge of early childhood development as well as mental wellbeing (according to Result Based Framework). It was found that for 2 to 4 home based, 21.4% Mother Volunteer's understanding on ECD knowledge was improved, while 64.3% Mother Volunteers were steady.

In this study Mother Volunteers' mental wellbeing was also evaluated and the PHQ-9 analysis shows that 42.9% Mother Volunteers improved their mental wellbeing and 7.1% remained stable at the endline.

Table 24: Distribution of Changes in Facilitators' Outcomes from Baseline to Endline for 2 to 4 Home Based (Percentage)

Outcomes	2-4 Home Based		
	Improved	Stable	Declined
ECD Knowledge	21.4	64.3	14.3
Mental Wellbeing (PHQ-9)	42.9	7.1	50.0

Likewise, the mean difference shows a slight improvement in Mother Volunteers' knowledge. It was found that the mean score of Mother Volunteers' knowledge was 8.93 (2.30) at baseline and 9.07(2.02) at endline (Table 25). On the other hand, the mean scores of Mother Volunteers' mental wellbeing increased by .43 points at the endline (baseline vs. endline: 2.07 vs. 2.50, t=.43, p=.67, d=.11).

Table 25: Comparison of Facilitators' Outcomes at the Baseline and Endline for 2-4 Home Based HPL (Mean)

Outcomes	Baseline (N=14)	Endline (N=14)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	8.93±2.30	9.07±2.02	.14	.33	.75	.09
Mental Wellbeing (PHQ-9)	2.07±2.46	2.50±2.47	.43	.43	.67	.11

Children's Developmental Outcome

Table 26 demonstrates the percentage of children after calculating the difference from endline to baseline for respected indicators (according to Result Based Framework). For 2 to 4 home based, 39.3% children's communication improved, while 26.2% children were steady. Similarly, in terms of gross motor, fine motor, problem solving and personal social skills, 49.2%, 36.1%, 19.7% and 29.5% children improved, whereas 31.1%, 3.3%, 16.4% and 29.5% were stable on their status, respectively. Regarding total ASQ, as a whole, 39.3% children improved and 3.3% remained stable at the endline.

On the other hand, for socio-emotional skill, the result reveals that 78.7% children improved in socio-emotional skill at the endline.

Table 26: Distribution of Changes in Children's Developmental Outcomes from Baseline to Endline for 2 to 4 Home Based (Percentage)

Outcomes	2-4 Home Based		
	Improved	Stable	Declined
Communication	39.3	26.2	34.4
Gross Motor	49.2	31.1	19.7
Fine Motor	36.1	3.3	60.7
Problem Solving	19.7	16.4	63.9
Personal Social	29.5	29.5	41.0
Total ASQ	39.3	3.3	57.4
ASQ-SE	78.7	0.0	21.3

Moreover, to gain some insights about the intervention, a paired sample t-test was also conducted to compare the baseline and endline scores of children's developmental outcomes. The findings show that at the baseline, children scored 54.10 (7.04), 49.92 (10.70), 42.79 (11.64), 42.79 (11.64), 52.79 (8.64), and 55.08 (9.20) in communication, gross motor, fine motor, problem solving, and personal social subscales, respectively (Table 27). These means indicates that children had higher average scores of skills in communication, gross motor, fine motor, problem solving, and personal social subscale, as the total score of the subscales of ASQ-3 range from 0-60. On the

other hand, at the endline, the mean score in communication, gross motor, fine motor, problem solving, and personal social subscales were 55.00 (8.01), 54.34 (10.51), 37.38 (14.07), 43.03 (13.36), and 53.93 (7.42) respectively. But these are not statistically significant. In respect to the total ASQ total score, the mean score decreased from 254.67 (32.66) to 243.69 (39.69) from baseline to endline, which is not statistically significant ($p= .077$), with an effect size of $d= -0.230$.

In socio-emotional skills, the result found that children were in a very good position since lower score in ASQ SE means better socio-emotional skills. The mean score of this skill was found 2.25 (0.96) and 1.42 (0.85), respectively at the baseline and endline, while the total score of the measures was 10. Table 27 shows that after the intervention, the mean score decreased by 0.83 points, which is statistically significant ($p<.05$), with an effect size of $d=-0.672$.

Table 27: Comparison of Children's Developmental Outcomes at the Baseline and Endline for 2-4 Home Based HPL (Mean)

Outcomes	Baseline (N=61)	Endline (N=61)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
Communication	54.10± 7.04	55.00± 8.01	0.90	0.811	.421	0.104
Gross Motor	49.92± 10.70	54.34± 10.51	4.43	2.251	.028	0.288
Fine Motor	42.79± 11.64	37.38± 14.07	-5.41	-2.418	.019	-0.310
Problem Solving	52.79± 8.64	43.03± 13.36	-9.75	-4.922	.000	-0.630
Personal Social	55.08± 9.20	53.93± 7.42	-1.15	-0.847	.400	-0.108
Total ASQ	254.67± 32.66	243.69± 39.69	-10.98	-1.8	.077	-0.230
ASQ-SE	2.25± 0.96	1.42± 0.85	-0.83	-5.247	.000	-0.672

Discussion

This implementation research aimed to examine the effects of the Pashe Achhi program on improving child development as well as caregivers' and facilitators' knowledge, attitude and practices. To meet the objectives, the study examined children's developmental outcomes in communication, gross motor, fine motor, problem solving, personal social, socio emotional and behavioral issues. In addition, the study measured mothers' mental health condition which affects child development. The study followed pretest and posttest design where the samples were selected following random sampling technique. At baseline data was collected using telecommunication modality and at endline through in-person modality. Few participants could not be reached at endline due to families' migration to Bhashanchor and other areas as well as not having the access permission to camp. Hence for comparing the outcomes between baseline and endline, analyses were carried out on the matched sample of baseline and endline. To understand the intervention's effect, percentage of caregivers', children's and facilitators' status regarding the change in outcomes were carried out. Furthermore, paired sample t-test was run to understand the findings better.

Like other countries, the COVID-19 virus continued to spread and mutate throughout the last year in Bangladesh. In addition, there were several incidents in Rohingya camps, such as a number of fire incidents, floods during the monsoon, and fear of relocation to Bhasanchor. The Pashe Achhi telecommunication program was also stopped in July 2021 due to the government restrictions on use of cell phones by the Rohingya population. In the last year, therefore, there was a likelihood in decreasing the expected outcomes. However, it has been observed that the loss was reduced as well as even improvement took place in several domains, except for the areas of the camp that were highly affected by the incidents.

Notably, in socio-emotional skills, children improved in all the age cohorts. Possible explanations behind this improvement could be the continuous psychosocial support provided to the mothers, even after the discontinuation of the program. Moreover, it is worth noting that the Pashe Achhi program is successful in addressing socio-emotional skills. The improvement had also been observed in 2020 regarding socio-emotional skills.

For 2 to 6 center based, the paired sample t-test indicates that children improved in communication, gross motor, problem solving, total ASQ and socio-emotional skills. The children received the Pashe Achhi program till July 2021. In addition, they also received psychosocial support throughout the year. Furthermore, compared to 2020, COVID-19 situation was more relaxed in this year and children therefore communicated and played more with other children that could be a possible reason of the improvement in communication, gross motor and personal social skills. More specifically, the program also emphasized more on reciting poem and story telling that might improve children's communication skill. It is also important to consider that as those children live in the hilly area, their gross motor skill is better. However, the mean scores of fine motor skill remained same as per paired sample t-test and declined in problem solving skills. The interaction that is required for fine motor skills did not happen for this age cohort, as the score of parents' support interaction with their children decreased from baseline to endline. Besides, the Rohingya mothers are less educated which might affect the development of children's fine motor skill. In terms of parents' ECD knowledge and attitude toward gender equity, improvement was also visible from baseline to endline. Although mothers' self-care practices reduced at endline, it is worth noting that the program has been implemented for almost two years and therefore the score of parents' self-care practices was already found higher at the baseline.

With regard to home based, the younger group (0 to 2 home based) improved more compared to the older group (2 to 4) children. In all the developmental domains, 0 to 2 home based children progressed from baseline to endline. Similar results were found in parents' outcome except self-care practices which already reached highest at the baseline. On the other hand, less improvement was observed in 2 to 4 home based. It is important to consider that younger children get more attached to mothers and more interaction occurs, which usually reduced in older children. Furthermore, most of the children of 2-4 home based were near by fire affected area. Probably mothers could not practice as much as what they gained knowledge due to emotional disturbance arose after fire incidents. In spite of those issues, 2-4 home based children improved in communication and gross motor skills.

In terms of facilitators outcomes, their knowledge on ECD improved for all the age cohorts. The facilitators received a basic training as well as monthly refresher trainings. Even when the calls were halted due to the government restrictions, a couple of training was conducted through an online platform, mobile and face to face to build the capacities of the frontline staff. The training helped the front-line staff gain different soft skills needed for their services.

Conclusion

The Pashe Achhi telecommunication was suspended in July 2021 due to government restrictions on the use of cell phones by the Rohingya population. Besides, there were some risk factors such as fire incidents, flood, etc. However, the program team provided the psychosocial support (PSS) throughout the year and distributed some play and learning materials, biscuits as well as amazing co-created story books to support the children and their families that help to reduce the loss due to the unanticipated incidents. Therefore, a need for the continuous program is noticeable to ensure children's healthy development and wellbeing.

Annex

Table 8: Distribution of Changes in Caregivers' Outcomes from Baseline to Endline for 2 to 4 Center Based (Percentage)

Outcomes	2-4 Center Based		
	Improved	Stable	Declined
ECD Knowledge	32.4	37.1	30.5
Attitude towards Gender Equity	35.2	15.2	49.5
Supportive Interaction	31.4	8.6	60.0
Self-Care Practices	2.9	43.8	53.3
Mental Wellbeing (PHQ-9)	23.8	24.8	51.4
Parent-Child Relationship (CPRS)	25.7	1	73.3

Table 9: Comparison of Caregivers' Outcomes at Baseline and Endline for 2 to 4 Center Based (Mean)

Outcomes	Baseline (N=201)	Endline (N=201)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	3.26± 0.59	3.29± 1.25	-0.029	-0.241	0.810	-0.024
Attitude towards Gender Equity	3.69± 2.5	3.75± 1.75	-.06667	-.245	.807	-0.024
Supportive Interaction	16.61± 1.87	14.70± 3.34	1.914	5.246	0.000	0.512
Self-Care Practices	1.95± 0.21	1.42± 0.50	0.505	9.289	0.000	0.907
Mental Wellbeing (PHQ-9)	1.31± 2.12	2.34± 2.75	-1.038	-3.194	0.002	-0.312
Parent-Child Relationship (CPRS)	102.96± 7.43	94.81± 10.55	-8.14	-6.67	.000	-.65

Table 10: Distribution of Changes in Children's Developmental Outcomes from Baseline to Endline for 2 to 4 Center Based (Percentage)

Outcomes	2-4 Center Based		
	Improved	Stable	Declined
Communication	36.2	28.6	35.2
Gross Motor	43.8	33.3	22.9
Fine Motor	51.4	8.6	40.0
Problem Solving	26.7	15.2	58.1
Personal Social	45.7	21.0	33.3
Total ASQ	43.8	1.9	54.3
ASQ-SE	40.0	0.0	60.0

Table 11: Comparison of Children's Developmental Outcomes at the Baseline and Endline for 2-4 Center Based HPL (Mean)

Outcomes	Baseline (N=105)	Endline (N=105)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
Communication	54.857± 6.880	54.950± 6.881	0.095	0.096	.923	0.009
Gross Motor	51.476± 11.908	55.620± 8.017	4.143	2.863	.005	0.279
Fine Motor	41.714± 11.825	41.710± 14.224	0.000	0.000	1.000	0.000
Problem Solving	53.524± 9.249	45.480± 14.014	-8.048	-4.919	.000	-0.480
Personal Social	51.191± 7.675	52.520± 9.661	1.333	1.226	.223	0.120
Total ASQ	252.762± 32.180	250.290± 36.617	-2.476	-0.545	.587	-0.053
ASQ-SE	1.479± 1.188	1.408± 0.786	-0.072	-0.513	.609	-0.050

Table 12: Distribution of Changes in Caregivers' Outcomes from Baseline to Endline for 4 to 6 Center Based (Percentage)

Outcomes	4-6 Center Based		
	Improved	Stable	Declined
ECD Knowledge	44.8	26.0	29.2
Attitude towards Gender Equity	38.5	20.8	40.6
Supportive Interaction	33.3	7.3	59.4
Self-Care Practices	0	47.9	52.1
Mental Wellbeing (PHQ-9)	38.5	12.5	49.0
Parent-Child Relationship (CPRS)	31.3	4.2	64.6

Table 13: Comparison of Caregivers' Outcomes at Baseline and Endline for 4 to 6 Center Based (Mean)

Outcomes	Baseline (N=201)	Endline (N=201)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
ECD Knowledge	2.99± 0.31	3.39± 1.48	-0.40	-2.56	0.012	-0.261
Attitude towards Gender Equity	3.32± 2.02	3.31± 2.02	0.01	0.05	0.963	0.005
Supportive Interaction	15.83± 2.87	13.85± 3.84	1.98	3.92	0.000	0.400
Self-Care Practices	1.98± 0.14	1.46± 0.50	0.52	10.16	0.000	1.037
Mental Wellbeing (PHQ-9)	2.91± 2.71	3.19± 3.31	-0.28	-0.65	0.517	-0.066
Parent-Child Relationship (CPRS)	100.36± 7.00	94.23± 10.96	-6.12	-4.49	.000	.45

Table 14: Distribution of Changes in Children’s Developmental Outcomes from Baseline to Endline for 4-6 Center Based (Percentage)

Outcomes	4-6 Center Based		
	Improved	Stable	Declined
Communication	46.9	24.0	29.2
Gross Motor	72.9	9.4	17.7
Fine Motor	43.8	13.5	42.7
Problem Solving	31.3	9.4	59.4
Personal Social	69.8	9.4	20.8
Total ASQ	58.3	5.2	36.5
ASQ-SE	80.2	1.0	18.8

Table 15: Comparison of Children’s Developmental Outcomes at the Baseline and Endline for 4-6 Center Based HPL (Mean)

Outcomes	Baseline (N=96)	Endline (N=96)	Mean Difference (Endline- Baseline)	t	p	Effect size, d
	M±SD	M±SD				
Communication	51.30± 9.18	53.65± 9.88	2.34	1.78	.078	0.182
Gross Motor	43.85± 11.20	52.55± 10.69	8.70	5.45	.000	0.556
Fine Motor	36.77± 12.48	36.77± 15.42	0.00	0.00	1.000	0.000
Problem Solving	40.94± 14.75	36.72± 12.75	-4.22	-2.59	.011	-0.264
Personal Social	42.86± 12.33	52.60± 9.57	9.74	7.08	.000	0.722
Total ASQ	215.73± 44.25	232.29± 41.90	16.56	3.34	.001	0.341
ASQ-SE	2.24± 0.62	1.44± 0.96	-0.80	-7.53	.000	-0.769



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