



## EDUCATION

BRAC Research Report

August 2014

# Changes in School Enrolment in Some Selected Marginalized *Upazilas* of Sylhet Division as a Result of BRAC Intervention

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## ACKNOWLEDGEMENTS

The research team is grateful to many for their support at various stages of the study. Dr. Safiqul Islam, the Director of BRAC Education Programme (BEP) was keen to have such a study. Mr. Profulla Chandra Barman, Programme Head of BEP and Mr. Milton Roy, Regional Manager of BEP in Sylhet division and their colleagues at various field offices were extremely helpful in providing official information as per need of the study. Our sincere thanks also go to our colleagues in BEP and RED who were present in the seminars organized for this study and provided us useful feedback and suggestions.

We would like to express our sincere thanks to Mr Iftekhar A Chaudhury, Editing and Publications, for editing the report. Special thanks go to Mr Altamas Pasha for copy editing and Mr Akram Hossain for formatting the report.

RED is supported by BRAC's core fund and funds from donor agencies, organizations and governments worldwide. Current donors of BRAC and RED include Aga Khan Foundation Canada, AIDA-Spain, Asian Disaster Preparedness Center, AusAid, Australian High Commission, AVRDC (The World Vegetable Centre), Bencom S.r.L, BRAC-UK, BRAC-USA, British Council, Campaign for Popular Education, Canadian International Development Agency, CARE-Bangladesh, Center for Development Research, Commonwealth Foundation, Department For International Development (DFID), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), EACI-Qatar, Embassy of the Kingdom of the Netherlands, Euro consult Mott Mac Donald, European Commission, Family Health International, FHI Solutions, LLC, Foundation Open Society Institute, The Global Alliance for Improved Nutrition, Global Development Network, The Global Fund, Govt. of Bangladesh (GoB), The Hospital for Sick Children, Canada, ICDDR,B, International Food Policy Research Institute, International Labour Organization, International Potato centre, International Rice Research Institute, International Union for Conservation of Nature and Natural Resources, Liverpool School of Tropical Medicine, Manusher Jonno Foundation, Oxfam Novib (NOVIB), Oxford University, Rockefeller Foundation, Safer World, Sight Saver-UK, Social Marketing Company, UN Women, UNICEF, Unilever-UK, United Nations Development Program, University of Bonn, University of Leeds, University Research Company LLC, Vision Spring, Women WIN, World Bank, World Fish and World Food Program.

## ABSTRACT

This study aims to estimate changes that have taken place in school enrolment in villages located in eight marginalized *upazilas* of Sylhet division where BRAC had established new schools during 2012–13 and also investigate village preference of BRAC in establishing schools. Along with baseline data of 2011, new data collected from intervention and non-intervention villages at the end of 2013 also were analysed. Findings reveal that BRAC was quite successful in increasing enrolment of children in both pre-primary and primary schools through its direct and indirect (through the Education Support Programme) intervention in about half of the villages of the *upazilas*. As a result, out-of-school children also reduced in these villages both in absolute number and in proportion. Primary educational intervention was absolutely poverty focused; however, this was not the case for pre-primary intervention. Most marginalized villages were still waiting to be intervened. Very little increase in enrolment in the non-intervention villages was noticed which had no influence in reducing out-of-school children; rather it increased in absolute number due to the increase of population. Finally, four policy recommendations were made to facilitate achievement of EFA and MDG goals in these *upazilas*. These included a collective engagement of the government, BRAC, local NGOs and the development partners, increased financial support independently or under the third Primary Education Development Programme (PEDP 3), expansion of programme in all villages and special attention to the most marginalized villages. A number of studies were also proposed.

# 1 INTRODUCTION

## 1.1 BACKGROUND

Bangladesh has made impressive progress in reaching the Millennium Development Goals (MDGs) related to education (Government of Bangladesh 2013). Huge increase in school enrolment at primary and secondary levels and gender parity at both are the basis of such impressive gains. Pluralism in the provision incorporating the government, private sector and non-governmental organizations made such achievement possible. However, the struggle for quality of education is still in place.

Behind such signs of progress, inequality in school enrolment exists with respect to parental education, household economy, geographical location, and administrative division (Nath and Chowdhury 2009). Children of the never schooled parents and those from the deficit household economy are less likely to be enrolled in schools. However, at the same time, during the past two decades, improvement in enrolment among the children belonging to poor socioeconomic background was greater than others. This was because they had very low level of enrolment rate at the beginning of the 1990s. *Education Watch* studies showed that Sylhet division lagged behind the other divisions in school enrolment. UNICEF (2010) identified 80 ‘most deprived’ *upazilas* in the country in terms of social progress of which 16 were from Sylhet division. Forty-two per cent of the *upazilas* under Sylhet division fell under this category. Geographical targeting of educational intervention was thus urged. *Education Watch* study on Sylhet division identified a number of specific challenges which needs to be addressed to upgrade the division in line with the national average and achieve the MDG targets (Nath *et al.* 2011).

BRAC Education Programme (BEP), since its launch in 1985, targeted the poorer section of the communities to expand education. Girls and the children of never schooled parents got priority in admission into BRAC’s non-formal schools. The start was with BRAC Primary Schools (BPS). BRAC Pre-Primary Schools (BPPS) came later. Both are community based single teacher, single classroom schools. The former is a four year course that provides the full range of primary education and the later is a one year course. Till date, about 4.5 million children received primary education from BRAC schools and 4.9 million received pre-primary education (BEP MIS). Quality of education in BRAC schools was better than that of the government and non-government primary schools (Nath 2012).

In 2011, BRAC decided to work intensively with the marginalized communities in some of the *upazilas* of Sylhet division. Eight *upazilas* were selected, two from each district of the division. The *upazilas* are Baniachang, Nabiganj, Gowainghat, Companiganj, Kamalganj, Juri, Bishwambarpur and Sulla. Six of them were from UNICEF’s ‘most deprived’ category. A household census was carried out in 2011 in these *upazilas* (Nath 2013). The average primary net enrolment rate (NER) in these *upazilas* was only 81.8% which was far behind the national average of over 90%. The rate was 4–10 percentage points lower than the eight-*upazila* average in some of the *upazilas*. A third of the 1,820 villages in the *upazilas* had NER less than the eight-

*upazila* average and it was less than the national average in two-thirds of the villages. The study also identified 125,298 out-of-school children throughout the *upazilas* belonging to age group 5–14 years.

BEP seriously considered the findings of this study in its planning process. Findings were discussed in a meeting of the education managers of BRAC in the region. Village and age-wise distribution of out-of-school children was used in preparing a plan for educational intervention in the *upazilas*. Three types of interventions were considered which primarily aimed at increasing school enrolment and reducing the number of out-of-school children in the region. It can be expected that this would subsequently increase primary completion rate and member of literate persons in the *upazilas*. Two of the interventions were directly operated by BRAC. These are BRAC pre-primary school (BPPS) and BRAC primary school (BPS). The third one was BRAC assisted primary schools that were operated by local NGOs under BRAC's Education Support Programme (ESP). Pre-primary schools were for children of age 5–6 years

and the primary schools for children of age 8–10 years. During 2012–13, BRAC opened 2,144 new schools; of which 959 were pre-primary, 1,019 primary directly operated by BRAC and 166 primary schools under ESP. Table 1.1 provides distribution of

**Table 1.1 Number of BRAC schools opened in eight *upazilas* of Sylhet division during 2012–13 by school type and year**

School type	Year		Total
	2012	2013	
BPPS	396	563	959
BPS	512	507	1019
BPS-ESP	134	32	166
<b>Total</b>	<b>1,042</b>	<b>1,102</b>	<b>2,144</b>

schools by school type and year. Number of students in these schools was approximately 64,320. These schools were established in 866 villages; which was about 47.6% of the total number of villages in the *upazilas*.

Two years have passed after the census in eight *upazilas*. BRAC implemented the above educational interventions in the *upazilas* during this period. It can be expected that BRAC's intervention has primarily helped in increasing school enrolment in the areas and reducing the number of out-of-school children. This study was thus designed to explore the changes in school enrolment as a result of BRAC's intervention in the eight marginalized *upazilas* in Sylhet division.

## 1.2 OBJECTIVES

This study broadly aimed to estimate the changes that took place in school enrolment in the villages where BRAC established new schools during 2012–13. However, before doing so, an investigation of the village preference of BRAC in establishing schools was also under consideration. Following are the specific objectives.

- a. Whether there was any preference of BRAC in selecting villages for establishing new schools during 2012–13 in eight *upazilas* of Sylhet division.
- b. Whether there was any change in school enrolment rates among pre-primary and primary school aged children in the villages where BRAC established schools during 2012–13.
- c. Whether BRAC intervention could make any noticeable change in the distribution of students by school type in the villages.

- d. Whether there was any difference in the change of enrolment rates in terms of gender, parental education, household economy, village size, and education of the population in the villages.
- e. Whether there was any specific group of children in terms of socioeconomic background and village characteristics who benefitted more from BRAC intervention.
- f. Whether BRAC intervention could reduce out-of-school children from the intervention villages.

## 2 RESEARCH METHODOLOGY

This section of the report includes information on the research methods and techniques adopted, the instruments used, sampling strategies followed, field level data collection procedures and analysis techniques. The strengths, limitations, ethical issues and implications of the study are also addressed.

### 2.1 METHODS

In this study, intervention village refers to those villages located in eight *upazilas* of Sylhet division where BEP established new schools during 2012–13 (it may be BPPS, BPS or BPS-ESP) and non-intervention village refers to those villages of the *upazilas* where BEP did not establish any new school during the same period.

Realizing the objectives of the study and appropriateness of the chosen method, this study utilized quantitative approach of research. Data for this study came from three independent but related sources. The sources are as follows.

- The eight *upazila* household census conducted in 2011 (Nath 2013)
- Village, year and school type-wise number of BRAC schools established in eight *upazilas* during 2012–13
- A new household survey in a number of intervention and non-intervention villages carried out in late 2013

The first source was commonly used in achieving each of the six specific objectives of the study. The second source along with the first helped achieve the first objective and also sampling for the new household survey. The first and the third sources together were used to achieve the second to the sixth objectives where the first source acted as the baseline.

### 2.2 INSTRUMENTS

The household census instrument is available in Nath (2013). Village-wise number of BRAC schools established during 2012–13 segregated by year and school type was collected from the branch offices of BRAC using a structured format. An abridged version of census questionnaire was used for the new household survey in 2013. This questionnaire contained education and schooling related information of household members, background information of the school aged children and household level socioeconomic characteristics. Reasons for dropout or never enrolment were also collected. Other information included parental education, religion, ethnicity, location (plain, *haor*, tea-estates/hilly areas, etc.), land size, labour sale status, household food security status and availability of electricity at home.

## 2.3 SAMPLING

The 1,820 villages found in the census were divided into two categories: intervention and non-intervention. From them, 150 villages were brought under the survey: 100 from the intervention and 50 from the non-intervention category. The intervention villages were selected randomly and non-intervention as corresponding (in terms of enrolment rate) to the selected intervention villages.

The initial plan as per the study proposal was to survey 100 households from each of the 150 villages; totalling 15,000 for the whole survey. In the villages that had more than 100 households, a systematic sampling technique was followed to select 100 households. However, there were also cases where villages had less than 100 households. In those particular cases, all the households in those villages were surveyed. Due to some smaller sized villages, at the end of the survey, the sample size eventually reduced to 13,937 households; 9,408 from the intervention and 4,529 from the non-intervention villages.

Type of intervention was not considered while 100 intervention villages were sampled. It was observed later that 48 of them had BPPS intervention and 77 had BPS (including ESP) intervention. It meant that BRAC established both types of schools in 25 villages. Table 2.1 provides some information from the above sample which would be the basis (denominator in other word) of all analyses for this report.

**Table 2.1 Some basic information about sample**

Issues	Intervention						Non-intervention	
	Pre-primary		Primary		Total		2011	2013
	2011	2013	2011	2013	2011	2013		
Village	48	48	77	77	100	100	50	50
Household	14,041	4,462	20,641	7,280	26,661	9,408	7,354	4,529
Children aged 5y	2,348	738	3,462	1,241	5,810	1,979	1,192	737
Children aged 4–5y	3,945	1,353	5,971	2,272	7,679	2,862	2,205	1,449
Children aged 6–10y	11,571	3,615	17,202	5,994	22,147	7,655	6,082	3,805
Pre-primary students	833	773	1,401	981	1,646	1,295	330	430
Primary students	11,216	3,707	16,422	6,198	21,276	7,882	5,902	3,788

## 2.4 DATA COLLECTION, ANALYSIS AND REPORTING

Trained field enumerators collected all information visiting the sampled households. A trained field management team including the researchers provided four-day training to the enumerators before starting of actual field work. Classroom discussions and field practices were arranged for the enumerators as part of training.

During the survey, interviews were held at the premises of the households. The heads or their spouses or any adult members of the households were considered as respondents. The researchers and field management staff were present in the study villages for supervising field activities. Post-enumeration checks were done. Data were then entered into the computers and subsequently analyzed using SPSS after adequate cleaning and cross-checking. Appropriate part of the census data was matched with this new data. Appropriate statistical tools were used in data analysis and then the research team prepared the report.

## Data validation

Field monitoring was done to find whether the enumerators sampled the households rightly and collected data in the way they were trained. Each field team consisted of two members. They also oversaw and checked each other's work. A supervisor supervised two to three teams. The research team randomly visited the sampled villages. Along with this, five per cent re-interview was carried out to check the quality of data. Comparison of interviewed and re-interviewed data showed that overall quality of data was satisfactory.

## 2.5 STRENGTHS AND LIMITATIONS

Like any other sample survey based study this study also has some strengths and a number of limitations. However, the research team took some measures to reduce weaknesses and increase strengths.

The following are some of the strengths of the study:

- This is the first study after massive intervention of BRAC in low performing *upazilas* of Sylhet division which has shown changes in school enrolment in the intervention villages. Use of baseline census information that was collected before the launch of the intervention was helpful in measuring the change. As the programme did not intervene in all the census villages it was possible to select non-intervention villages for comparison purpose. All these helped in calculating overall gain as a result of BRAC intervention.
- In this study for the first time attempt was made to identify the factors influencing selection of villages for educational intervention of BRAC. This will help the programme management to reshape intervention policy.
- Separate analyses of pre-primary and primary enrolment and out-of-school gave a holistic view of the access issue. Relationship of these with a number of households and village level background variables helped to gain better understanding of the issue.
- Sample for the study was large enough to capture changes by various characteristics at individual and village level.

The following are some of the limitations of the study:

- According to the design of the study we planned to reach 15,000 households through the survey which was conducted after two years of intervention but it was not possible due to the small size of some villages. A total of 1,063 households could not be reached. No attempt was made to fill up this gap through taking new villages or additional samples from the sampled villages.
- The methodology was not designed to capture *upazila* or village-wise changes due to the intervention.
- Accuracy of major estimates depended on correct reporting of age of children by the respondents. However, it was the most challenging and time consuming task in the survey. Although all possible measures were taken to have the 'best' estimated age, some errors could not be ruled out.

### 3 THE INTERVENTION VILLAGES

During 2012–13, BRAC established 2,144 schools in eight marginalized *upazilas* of Sylhet division; 1,042 in 2012 and 1,102 in 2013. Among them, 1,019 were BRAC primary schools (BPS), 166 primary schools under Education Support Programme (BPS-ESP), and 959 BRAC pre-primary schools (BPPS). In other words, 48.6% of the schools were established in the first year and 51.4% in the second year. School type-wise, 55.3% were primary schools (47.6% directly by BRAC and 7.7% under ESP) and 44.7% were pre-primary schools. Overall, the number of schools established increased from 2012 to 2013, significant increase occurred in the case of pre-primary schools. For instance, in 2012, 512 BPS and 134 BPS-ESP were established which were respectively 507 and 52 in 2013. On the other hand, 396 BPPS were established in 2012 which increased to 563 in 2013.

#### 3.1 UPAZILA AND LOCATION-WISE SCHOOL

Nabiganj was at the top of the *upazilas* in terms of school establishment during 2012–13 with Baniachang much closer to it (Table 3.1). These were followed by Kamalganj and Gowainghat *upazilas* respectively. Thirty-eight per cent of the schools were established in the top two *upazilas* and about two-thirds in the top four *upazilas*. This was not unlikely because of the size of the *upazilas* in terms of population and density of out-of-school children substantially varied by *upazilas*. Where there was demand, schools had to be established there. In terms of number, pre-primary schools surpassed the primary schools in two *upazilas*; these are Baniachang and Nabiganj. However, more primary schools were established than pre-primary schools in each of the remaining six *upazilas*. No primary school under ESP was established in Baniachang and only three in Juri.

**Table 3.1 Number of schools established during 2012–13 by *upazila* and school type**

<i>Upazila</i>	School type				Grand total	Overall %
	BPS	ESP-BPS	All BPS	BPPS		
Baniachang	194	0	194	210	404	18.8
Nabiganj	161	13	174	237	412	19.2
Gowainghat	144	40	184	88	272	12.7
Companiganj	73	30	103	40	143	6.7
Kamalganj	158	37	195	136	331	15.4
Juri	103	3	106	92	198	9.2
Bishwambarpur	118	32	150	94	244	11.4
Sulla	67	11	78	62	140	6.5
Total	1019	166	1185	959	2,144	100.0

The 2011 study identified that 60.4% of the households in the eight *upazilas* lived in plain land, 28.5% in *haor* areas, and 13.1% in tea-estates/hilly areas (Nath 2013). A connection of this was observed in choosing location for school establishment. Overall, 63.8% of the schools were established in the plain land, 22.2% in the *haor* areas and

14% in the tea-estates/hilly areas (Table 3.2). The scenario was noticeably different for pre-primary and primary schools. Of the primary schools, 57.2% were established in the plain land, 23.1% in the *haor* areas and 19.7% in the tea-estates/hilly areas. These figures were respectively 72, 21 and 7% in the case of pre-primary schools. BRAC was more inclined to establish primary schools in the *haor* and tea-estates/hilly areas compared to pre-primary schools. Lower presence of pre-primary schools and primary schools under ESP in the tea-estates/hilly areas was observed.

**Table 3.2 Percentage distribution of schools by location and type**

Location	School type				Total (2144)
	BPS (1019)	ESP (166)	BPPS (959)	BPS+ESP (1185)	
Plain land	56.2	63.3	72.0	57.2	63.8
Haor area	23.0	24.0	21.0	23.1	22.2
Tea-estates/ hilly areas	20.8	12.7	7.0	19.7	14.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

### 3.2 COVERAGE OF VILLAGE

BRAC established pre-primary or primary schools in 47.6% of the 1,820 villages during 2012–13. Number of villages covered by BRAC programme was 866. No difference was observed in year-wise coverage of village; new schools were established in about 35% of the villages each year. Of the 631 villages (34.7%) where BRAC established schools in 2012, 229 (12.6%) were not considered for establishing new schools in 2013. Instead 235 new villages were added (12.9%). Thus, in terms of establishing new schools, 402 villages (22.1%) were common in both the years. School type-wise, BPS was present in 29.5% of the villages, BPS-ESP in 7% and BPPS in 26.8% (Table 3.3).

**Table 3.3 Percentage distribution of villages by year of establishing school and school type**

Year	School type			
	BPS	ESP- BPS	BPPS	Any
Only 2012	10.6	5.5	3.5	12.6
Only 2013	9.8	1.2	10.1	12.9
Both years	9.1	0.3	13.2	22.1
None	70.5	93.0	73.2	52.4
<b>All</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

*Upazila*-wise variation was observed in terms of village coverage (Table 3.4). Nabiganj and Bishwambarpur were the two top most *upazilas* in this regard. Any type of BRAC schools was established in over 56% of the villages in each of these two *upazilas*. On the other hand, lowest coverage was observed in Juri and Kamalganj *upazilas*, respectively 41.4 and 42.8% of the villages were covered in these two *upazilas*. It may be mentioned that former two *upazilas* were mainly characterised by plain land and the later two by tea estates/hilly areas. The top two *upazilas* were followed by Baniachang and Sulla; around 46% of villages in each *upazila* were covered by BRAC programme. Coverage of remaining four *upazilas* varied from 41–44%. Whereas, Baniachang *upazila* was at the second position, very close to the first in terms of number of schools, it stood at the third position in terms of coverage of village and was far behind the second. On the other hand, Bishwambarpur *upazila* was at the fifth position in terms of number of schools, it almost secured the first position in terms of coverage of villages.

School type-wise analysis shows different scenario for pre-primary and primary schools (Table 3.4). Here, primary includes BPS-ESP too. Whereas, highest coverage

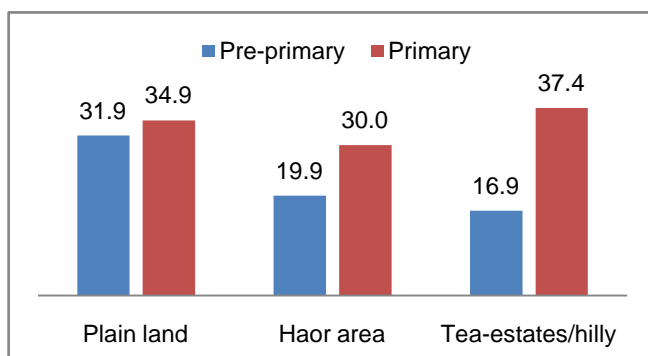
**Table 3.4 Percentage of villages where BRAC schools were established during 2012–13 by upazila and school type**

Upazila	School type		
	BPPS	BPS	Any
Baniachang	30.4	34.0	46.1
Nabiganj	43.5	28.9	56.2
Gowainghat	17.2	36.6	44.0
Companiganj	11.3	39.6	43.4
Kamalganj	21.9	29.4	42.8
Juri	24.8	26.9	41.4
Bishwambarpur	25.1	47.4	56.1
Sulla	25.0	31.7	45.8
Total	26.8	33.7	47.6

Note: BPS includes ESP too

of pre-primary schools was found in Nabiganj upazila but it was Bishwambarpur upazila for primary schools. Coverage of primary schools was much higher than that of the pre-primary schools in three upazilas. These are Gowainghat, Companiganj and Bishwambarpur. On the other hand, an opposite scenario was observed in Nabiganj upazila.

**Figure 3.1 Percentage of villages where BRAC schools were established during 2012-13 by location and school type**



Pre-primary schools were established in 31.9% of the plain land villages, 19.9% of the villages in haor areas and 16.9% of the villages in the tea-estates/hilly areas ( $p < 0.001$ ). On the other hand, primary schools were established in 34.9% of the plain land villages, 30% of the villages in haor areas and 37.4% of the villages in the tea-estates/hilly areas. In terms of coverage of village, primary schools were ahead of pre-primary schools in all the three locations. The gap was much higher in haor and tea-estates/hilly areas compared to the plain land (Figure 3.1).

(Table 3.5). For instance, only one pre-primary school was established in each of the 11.4% of the villages, two schools in each of the 9.4% of the villages, three schools in each of the 3% of the villages, four schools in each of the 2.5% of the villages and five or more schools in each of the 0.6% of the villages. On the other hand, one primary school was established in each of the 18.2% of the villages, two schools in each of the 8.1% of the villages, three schools in each of the 3.9% of the villages, four schools in each of the 1.8% of the villages and more than four schools in each of the 1.7% of the villages.

**Table 3.5 Distribution of villages by number of BRAC schools established**

Number of school	Pre-primary		Primary	
	Number of village	% of village	Number of village	% of village
Nil	1332	73.2	1206	66.3
1	208	11.4	332	18.2
2	171	9.4	148	8.1
3	55	3.0	71	3.9
4	45	2.5	32	1.8
5–13	9	0.6	31	1.7
All	1820	100.0	1820	100.0

BRAC did not establish schools only in those villages where there was no school (Table 3.6). However, it covered a section of such villages. Overall, 28.9% of the villages in eight *upazilas* came under BRAC intervention where there was at least one formal primary school in each village. BRAC also intervened in 18.7% of the villages where there was no formal primary school in 2011. BRAC did not enter into 21.3% of the villages where there was at least one formal primary

**Table 3.6 Distribution of villages in terms of presence of BRAC and formal schools by *upazila***

<i>Upazila</i>	School type			
	Only BRAC	Only formal	Both	None
Baniachang	21.7 (72)	22.0 (73)	24.4 (81)	31.9 (106)
Nabiganj	22.5 (80)	15.4 (55)	33.7 (120)	28.4 (101)
Gowainghat	17.9 (48)	18.7 (50)	26.1 (70)	37.3 (100)
Companiganj	21.4 (34)	23.3 (37)	22.0 (35)	33.3 (53)
Kamalganj	14.1 (38)	27.9 (75)	28.6 (77)	29.4 (79)
Juri	11.7 (17)	22.8 (33)	29.7 (43)	35.9 (52)
Bishwambarpur	24.6 (42)	14.0 (24)	31.6 (54)	29.8 (51)
Sulla	7.5 (9)	34.2 (41)	38.3 (46)	20.0 (24)
Total	18.7 (340)	21.3 (388)	28.9 (526)	31.1 (566)

school. After two years of BRAC intervention 31.1% of the villages had no formal or BRAC School. Other NGOs may have their schools in some of these villages.

School type-wise analysis shows that BRAC established primary schools in 272 villages where there was no formal primary school (14.9%) and in 342 villages where there was at least one primary school (18.8%). It did not establish any primary school in 572 villages which had at least one formal school in each of the villages (31.4%) and also in 634 villages where there was no formal school (34.8%). On the other hand, BRAC established pre-primary schools in 132 villages where there was no formal primary school (7.3%) and in 356 villages where there was at least one formal primary school (19.6%). It did not establish any pre-primary school in 558 villages where there was at least one formal primary school in each village (30.7%) and also in 774 villages where there was no formal school (42.5%). Overall, BRAC established pre-primary schools in 378 villages (20.8%), primary schools in 252 villages (13.8%) and both in 236 villages (13%). However, did not touch 954 villages (52.4%).

### 3.3 VILLAGE SIZE AND BRAC INTERVENTION

Village size was determined by number of households. A steady increase in the coverage of villages by BRAC intervention was observed with the increase of village size. This means that BRAC established fewer schools in small villages and more schools in large villages. For instance, there were 261 villages with 50 or less number of households in each. BRAC established 21 pre-primary schools in 6.1% of these villages and 35 primary schools in 11.5% of the villages. Again, 219 villages had 301-500 households in each. Over half of these villages were covered through establishing 243 pre-primary and 252 primary schools. Moreover, the coverage rate was found to be 59.8% for pre-primary and 72% for primary if the villages had 500 or more households. There were 107 villages with 500 or more households in each where 195 pre-primary and 306 primary schools were established.

**Table 3.7 Percentage of villages covered by village size (No. of HH) in 2011**

Village size (No. of HH)	% of village with pre-primary	Number of schools	% of village with primary	Number of schools
<= 50	6.1 (261)	21	11.5 (261)	35
51 – 100	14.4 (430)	94	20.9 (430)	114
101 – 150	20.5 (308)	94	28.9 (308)	127
151 – 200	28.3 (223)	111	36.3 (223)	136
201 – 300	40.1 (272)	201	48.2 (272)	215
301 – 500	50.7 (219)	243	53.0 (219)	252
500+	59.8 (107)	195	72.0 (107)	306
All	26.8 (1820)	959	33.7 (1820)	1185

Figures in the parenthesis indicate number of villages against specific group of village size

Correlation coefficients were also calculated. A poor correlation coefficient was observed between the number of pre-primary and primary schools established in the villages ( $\rho = 0.23$ ;  $p < 0.001$ ). On the other hand, a moderate level of relationship was observed between village size and number of schools established in the village. The correlation coefficient between village size and number of pre-primary schools was 0.42 ( $p < 0.001$ ) and between village size and number of primary schools was 0.54 ( $p < 0.001$ ).

### 3.4 ENROLMENT RATE AND BRAC INTERVENTION

In 2011, village-wise net enrolment rates of children aged 4–5 and 6–10 years were moderately correlated at a positive direction. The correlation coefficient was 0.41 ( $p < 0.001$ ). Two years later, number of schools established by BRAC in the villages was found poorly correlated to the above NERs. Correlation coefficient between village-wise pre-primary NER in 2011 and number of pre-primary schools established during 2012–13 was below 0.10. The correlation coefficient was mostly the same between village-wise primary NER in 2011 and number of primary schools established during 2012–13. This means that BRAC established schools irrespective of village level NER, without thinking about any affirmative action.

The above can be shown more clearly from Table 3.8. In 2011, there were 340 villages where the pre-primary NER was nil. BRAC established 71 schools in 14.4% of those villages. Again, of the 250 villages where the pre-primary NER was 10–<15%, 186 schools were established covering 36% of the villages. A similar scenario can be found in the case of establishment of primary schools. For instance, in 2011, 47 villages were found with primary NER less than 50%. BRAC established 14 schools during 2012–13 covering over a fifth of those villages. Again, 301 primary schools were established in 44.1% of 354 villages with primary NER 70–<80%. Three primary schools were established where the primary NER was cent per cent and 51 pre-primary schools were established where the pre-primary NER was 45% or more. In both the cases, coverage of village by establishment of BRAC schools steadily increased up to a certain level of NER and then decreased.

**Table 3.8 Percentage of villages covered by net enrolment rate in 2011**

Pre-primary NER in 2011	% of village covered	Number of schools	Primary NER in 2011	% of village covered	Number of schools
Nil	14.4 (340)	71	<50	21.3 (47)	14
0.01 - <5	29.1 (261)	136	50 - <60	46.7 (60)	66
5 - <10	26.5 (283)	149	60 - <70	43.3 (141)	133
10 - <15	36.0 (250)	186	70 - <80	44.1 (354)	301
15 - <25	29.7 (290)	188	80 - <90	36.1 (623)	404
25 - <45	30.4 (283)	178	90 - <100	25.0 (529)	264
45+	24.8 (105)	51	100	3.0 (66)	3
All	26.9 (1812)	959	All	33.7 (1820)	1,185

Figures in the parenthesis indicate number of village in specific NER group

### 3.5 EDUCATIONAL CHARACTERISTICS OF INTERVENTION VILLAGES

In this section, educational characteristics of the population of eight *upazilas* in 2011 were explored dividing them into intervention and non-intervention villages. The indicators include proportions of population ever enrolled in school and completed primary and secondary education, literacy rates of all population and those are adults, pre-primary and primary net enrolment rates and percentage of out-of-school children. Villages with pre-primary and primary school intervention were separately compared with those which had no intervention (Table 3.9). The villages where pre-primary schools were established during 2012–13 were significantly better than those with primary school intervention in all the educational indicators considered.

**Table 3.9 Percentage of population of various age groups by a number of educational indicators and intervention type of village**

Educational indicators	Intervention type of village				Level of significance (BPPS vs. None)	Level of significance (BPS vs. None)
	BPPS (488)	BPS (614)	None (954)	All (1820)		
Ever enrolled in school (6y+)	60.9	57.2	58.4	58.7	p<0.001	p<0.001
Primary completers (11y+)	42.5	37.3	39.4	39.5	p<0.001	p<0.001
Secondary completers (17y+)	7.6	6.1	7.9	7.2	p<0.001	p<0.001
Literacy rate (7y+)	42.4	38.6	40.6	40.4	p<0.001	p<0.001
Adult literacy rate (15y+)	44.9	40.1	42.8	42.5	p<0.001	p<0.001
Enrolment rate (4–5y)	15.1	14.3	13.8	14.4	p<0.001	ns
Enrolment rate (6–10y)	83.6	80.8	81.7	81.8	p<0.001	p<0.001
Out-of-school children (5–14y)	23.5	26.1	25.9	25.3	p<0.001	ns

Figures in the parentheses indicate number of villages

Source: Eight-*upazila* census 2011 (Nath 2013)

Pre-primary intervention villages were ahead of the non-intervention villages in seven of the eight educational indicators considered (Table 3.9). Schooling of the population, literacy rates, and children's school enrolment were significantly higher in the pre-primary intervention villages than the non-intervention villages. Percentage of out-of-school children was also lower in the intervention villages. The only indicator where the intervention villages were lagging behind the non-intervention villages was proportion of population completing secondary education.

On the other hand, primary intervention villages were lagging behind the non-intervention villages in six of the eight educational indicators (Table 3.9). These

include schooling of population, completion of primary and secondary education, literacy rates, and primary net enrolment rate. No difference between the intervention and non-intervention villages was found in rest two indicators. The two types of villages were equal in terms of pre-primary net enrolment rate and percentage of out-of-school children.

### 3.6 SOCIOECONOMIC CHARACTERISTICS OF INTERVENTION VILLAGES

Household location, land holding, labour sell status, availability of electricity at home, food security status, NGO membership, religion and ethnicity were brought under investigation as socioeconomic characteristics. Similar to the above, these characteristics of the households in 2011 were explored dividing them into intervention and non-intervention villages. Here too, pre-primary school intervention villages were found ahead of the primary school intervention villages in terms of households' socioeconomic characteristics (Table 3.10).

**Table 3.10 Percentage of households by a number of socioeconomic indicators and intervention type of village**

Socioeconomic indicators	Intervention type of village				Level of significance (BPPS vs. None)	Level of significance (BPS vs. None)
	BPPS (488)	BPS (614)	None (954)	All (1820)		
Average size of village (decimal)	291.2	273.4	127.0	189.6	p<0.001	p<0.001
Households living in plain land	68.4	58.8	56.9	60.4	p<0.001	p<0.001
Land less than 10 decimals	39.8	42.6	36.6	39.9	p<0.001	p<0.001
Land less than 50 decimals	65.5	67.5	63.3	65.6	p<0.001	p<0.001
Sell labour 100 days a year	39.1	46.6	42.5	43.6	p<0.001	p<0.001
Day labour as main HH income	29.7	37.0	34.1	34.3	p<0.001	p<0.001
Having electricity at home	46.7	41.5	40.4	42.1	p<0.001	p<0.001
Always in deficit household	16.7	18.3	16.1	17.2	p<0.001	p<0.001
Deficit household	54.2	56.1	54.4	55.3	ns	p<0.001
Households with NGO member	21.7	25.4	19.7	22.7	p<0.001	p<0.001
Households with BRAC member	6.1	6.9	5.4	6.2	p<0.001	p<0.001
Non-Muslim households	15.9	19.3	21.2	19.8	p<0.001	p<0.001
Small ethnic groups	1.7	7.1	4.9	5.4	p<0.001	p<0.001

Figures in the parentheses indicate number of villages  
Source: Eight-upazila census 2011 (Nath 2013)

Compared to the non-intervention villages, both pre-primary and primary schools were established in those villages which had more households living in plain land than *haor*, tea-estates or hilly areas. Both kinds of intervention villages were also characterised by proportionately more households owning no or small sized land (here, less than 10 or 50 decimals). Less proportion of households in the pre-primary intervention villages had at least one person selling manual labour for at least 100 days a year or manual labour as the main source of household income compared to those in non-intervention households. However, an opposite scenario was observed when primary school intervention villages were compared with non-intervention villages against these two indicators. Significantly more households of each kind of intervention villages had electricity at home compared to the non-intervention villages, although gap between intervention and non-intervention villages was more in the case

of BPPS intervention. Although no difference was observed between the BPPS intervention and non-intervention villages in terms of food security status of the deficit households but more households with always or sometimes in deficit was observed in the BPS intervention villages compared to non-intervention villages. The BRAC intervention villages of both kinds had more households with at least an NGO group member (*samity*) than those in the non-intervention villages. These may be any of the NGOs having microcredit programme. A similar finding was observed when BRAC member households were separately analyzed. BRAC intervened in those villages where a lower proportion of non-Muslim households lived. On the other hand, a mixed scenario was also observed in terms of ethnicity. BPPS intervention was found in those villages where a significantly lower proportion of households belonging to small ethnic groups lived. BPS intervention was found in those households where significantly more households from small ethnic groups lived than that of the non-intervention villages.

### **3.7 FACTORS AFFECTING CHOICE OF INTERVENTION VILLAGE**

This section aims to identify the factors or characteristics of villages where BRAC Education Programme established schools during 2012–13. Three regression models were built: one for pre-primary schools, another for primary schools and the rest for any kind of BRAC schools. In each case the dependent variable was categorized dichotomously. If at least one school was established in a village it was coded as 1 and if no school was established the code was 0. This had to be done because no BRAC school was established in majority of the villages followed by a number of villages with only one school, few villages with two schools, fewer with three schools and so on. Thus, three logistic regression models were built because of the dichotomous nature of the dependent variables.

Twelve variables were considered as independent. Eight of them were continuous and four categorical. The continuous variables included village size, adult literacy rate, per cent of out-of-school children, per cent of households having electricity at home, per cent of households with any NGO *samity* member, per cent of households with BRAC *samity* members, per cent of households selling manual labour as main source of income and per cent of food deficit households. The categorical variables included density of non-Muslims, small ethnic groups and households living in plain land and having formal school in the village. Table 3.11 provides measurement of the variables used in regression analyses. A stepwise approach was adopted. Thus, only the statistically significant explanatory variables ( $p < 0.05$ ) appeared in the final models.

Nine variables appeared in the model that was built for searching characteristics of the villages where BRAC pre-primary schools were established (Table 3.12). The variables were village size, out-of-school children, electricity at home, BRAC village organization membership, selling manual labour as principal source of household income, having less than 50 decimals of land, formal school in village, small ethnic groups and plain land. BRAC pre-primary schools had more chance to be established in villages which had the following characteristics.

- a) Larger in size, proportionately more households had electricity at home, proportion of BRAC village organization member was relatively higher and proportionately more households had less than 50 decimals of land;

- b) Less proportion of out-of-school children and proportion of households whose main source of income was selling manual labour;
- c) Where there was at least one formal school already, lower proportion of population from small ethnic groups and proportionately more households lived in the plain land.

**Table 3.11 Measurement of variables used in regression analysis**

Variable name	Measurement
<i>Dependent</i>	
Pre-primary	1 = established at least one pre-primary school in village, 0 = none
Primary	1 = established at least one primary school in village, 0 = none
Any school	1 = established at least one BRAC school in village, 0 = none
<i>Independent</i>	
Village size	Number of households in village, 0 – 1635
Adult literacy	Village-wise adult literacy rate, 0 – 100
Out-of-school children	Village-wise rate of out-of-school children, 0 – 95.8
Non-Muslim	0 = majority, 1 = minority, 2 = nil
Small ethnic groups	0 = majority, 1 = minority, 2 = nil
Electricity	Village-wise % of HHs having electricity at home, 0 – 100
NGO membership	Village-wise % of NGO member HHs, 0 – 83.3
BRAC membership	Village-wise % of HHs having BRAC <i>samity</i> member, 0 – 73.2
Labour household	Village-wise % of HHs selling manual labour as main source of income, 0 – 100
Deficit household	Village-wise % of food deficit HHs, 0 – 100
Plain land	0 = nil, 1 = partial, 2 = full
Formal school	0 = no formal school in village, 1 = at least one

**Table 3.12 Logistic regression model predicting establishment of BRAC pre-primary schools in the villages of eight marginalized *upazilas***

Explanatory variables	Regression coefficients	Odds ratios	Level of significance
Village size	0.006	1.006	p<0.001
Out-of-school children	-0.013	0.987	p<0.05
Electricity at home	0.005	1.005	p<0.05
BRAC membership	0.018	1.018	p<0.05
Labour household	-0.010	0.990	p<0.05
Land <50 decimals	0.010	1.010	p<0.05
<b>Formal school</b>			
None	0	1.000	
At least one	0.809	2.246	p<0.001
<b>Small ethnic group</b>			
Majority	0	1.000	
Minority	1.484	4.411	p<0.01
Nil	1.586	4.884	p<0.001
<b>Plain land</b>			
Nil	0	1.000	
Partial	0.121	1.129	ns
Full	0.551	1.735	p<0.001
Constant	-4.523		p<0.001
-2 Log likelihood	1432.574		
Cox & Snell R <sup>2</sup>	0.25		
Nagelkerke R <sup>2</sup>	0.35		

The second model was built to search the characteristics of the villages where BRAC primary schools were established. Four of the 12 variables appeared in this model (Table 3.13). These were village size, adult literacy rate, proportion of NGO member and percentage of non-Muslim households. BRAC primary schools were more likely to be established in the villages which had the following characteristics: Larger in size, low adult literacy rate, proportionately more households having at least one NGO member and lower proportion of non-Muslim households.

**Table 3.13 Logistic regression model predicting establishment of BRAC primary schools in the villages of eight marginalized upazilas**

Explanatory variables	Regression coefficients	Odds ratios	Level of significance
Village size	0.006	1.006	p<0.001
Adult literacy	-0.014	0.986	p<0.001
NGO membership	0.014	1.014	p<0.001
<b>Non-Muslim</b>			
Majority	0	1.000	
Minority	0.504	1.655	p<0.01
Nil	0.621	1.860	p<0.001
Constant	-1.794	0.166	p<0.001
-2 Log likelihood	1775.311		
Cox & Snell R <sup>2</sup>	0.19		
Nagelkerke R <sup>2</sup>	0.25		

The final model attempted to find out the characteristics of villages where any type of BRAC schools (pre-primary or primary) was established. Six of the 12 variables appeared in the model (Table 3.14). The variables included village size, adult literacy rate, NGO membership, formal school in village, presence of small ethnic groups and households living in plain land. BRAC schools of any type were more likely to be established in the villages which had the following characteristics: larger village size, lower rate of adult literacy, higher proportion of households having NGO *samity* members, having at least one formal school, lesser proportion of households belonging to small ethnic groups and higher proportion of households living in the plain land.

**Table 3.14 Logistic regression model predicting establishment of BRAC schools (primary or pre-primary) in the villages of eight marginalized upazilas**

Explanatory variables	Regression coefficients	Odds ratios	Level of significance
Village size	0.006	1.006	p<0.001
Adult literacy	-0.006	0.994	p<0.05
NGO membership	0.011	1.011	p<0.001
<b>Formal school</b>			
None	0	1.000	
At least one	0.264	1.303	p<0.05
<b>Small ethnic group</b>			
Majority	0	1.000	
Minority	0.788	2.200	p<0.01
Nil	0.861	2.366	p<0.01
<b>Plain land</b>			
Nil	0	1.000	
Partial	0.098	1.103	ns
Full	0.492	1.636	p<0.001
Constant	-2.347	0.096	p<0.001
-2 Log likelihood	2174.573		
Cox & Snell R <sup>2</sup>	0.17		
Nagelkerke R <sup>2</sup>	0.23		

The explanatory variables which appeared in the regression models collectively explained 25, 19 and 17% of the variations in the dependent variables respectively for 'pre-primary', 'primary' and 'any school' models. This was found from Cox and Snell  $R^2$ . However, in terms of Nagelkerke  $R^2$  these figures were respectively 35, 25 and 23%. Whatever the case is, larger portion of the variations were still unexplained by the regression models indicating missing of some important variables by the analyses.

## 4 CHANGES IN PRE-PRIMARY ENROLMENT

This chapter presents changes in pre-primary enrolment due to BRAC intervention during 2012–13 through its non-formal pre-primary schools known as BRAC pre-primary schools or BPPS. BRAC established pre-primary schools of its own in a number of villages. No such schools were operated through ESP. Comparison of non-intervention villages (50 nos.) with those having BPPS intervention (48 nos.) is the main focus of this chapter.

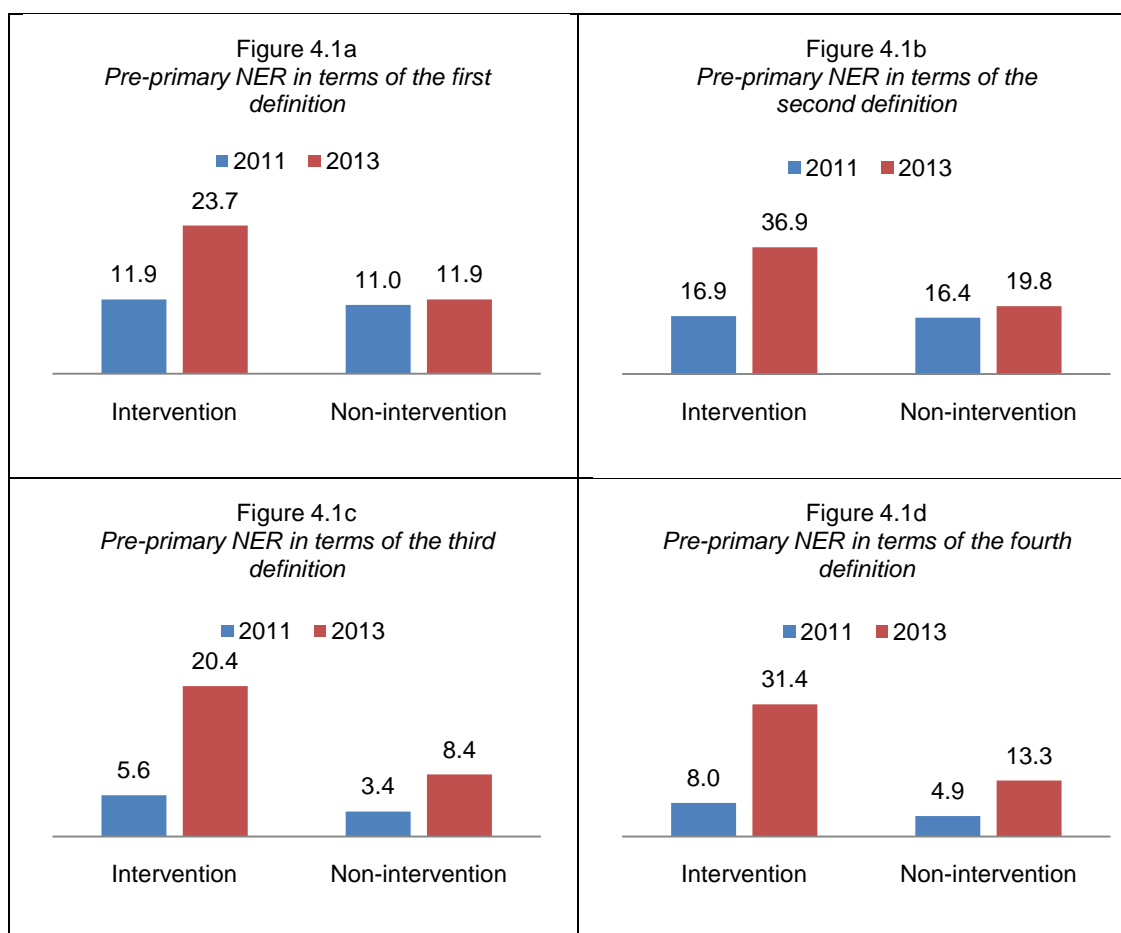
### 4.1 NET ENROLMENT RATE

Officially, the duration of pre-primary education in Bangladesh was one year. However, previous studies calculated pre-primary enrolment rate for two age groups: for age five years only and four and five years together. Some considered enrolment in any grade and some enrolment in pre-primary education. It seems that there is a lack of consensus on this issue. In this study we calculated net enrolment rate (NER) based on the following four definitions.

1. Percentage of children of 4–5 years currently enrolled in any grade among those of the same age group
2. Percentage of children of 5 years currently enrolled in any grade among those of the same age cohort
3. Percentage of children of 4–5 years currently enrolled in pre-primary education among those of the same age group
4. Percentage of children of 5 years currently enrolled in pre-primary education among those of the same age cohort

The NERs and their relationship with village type (intervention or non-intervention) and year varied with the variation in definition (Table 4.1, Figure 4.1 and Annexes 4.1 to 4.3). However, in terms of relationship, some commonalities were observed between the results of the first two definitions and that of the second pair of definitions as well. No difference between the NERs against the intervention and non-intervention villages was observed in 2011 when the first two definitions were applied, i.e., the children enrolled in any grade were considered as numerator. On the other hand, in the same year, NER was significantly higher in the intervention villages than that of the non-intervention villages in terms of the rest of the two definitions, i.e., when only those children who enrolled in pre-primary education were considered as numerator. In 2013, NER was significantly higher in the intervention villages than that of the non-intervention villages irrespective of the nature of the numerator and the denominator. Significant increase in NER from 2011 to 2013 was noticed in the intervention villages only but not in the non-intervention villages when the first two definitions were applied. On the other hand, statistically significant increase from 2011 to 2013 was noticed in both types of villages when the later two definitions were applied.

**Figure 4.1 Pre-primary net enrolment rate (NER) in terms of various definitions by village type and year**



In terms of the first definition, the NER significantly increased from 11.9% in 2011 to 23.7% in 2013 ( $p < 0.001$ ) in the intervention villages – a change of 11.8 percentage points. No significant change was noticed in the non-intervention villages during the same period. The rate doubled in the intervention villages where it increased only 0.9 percentage points in the non-intervention villages. Thus, gain of the programme due to BPPS intervention was 10.9 percentage points ( $11.8 - 0.9$ ). The gain was found to be 16.6 percentage points [ $(36.9 - 16.9) - (19.8 - 16.4)$ ] in terms of the second definition. It was 9.8 percentage points in terms of the third definition [ $(20.4 - 5.6) - (8.4 - 3.4)$ ] and 15 percentage points in terms of the fourth definition [ $(31.4 - 8.0) - (13.3 - 4.9)$ ]. Two issues emerged from these analyses. First, the gain in NER due to BPPS intervention was more if it was calculated among the children of age five years instead of 4–5 years. Second, the gain was slightly higher when enrolment in any grade was considered in the numerator than enrolment in pre-primary education.

Gender segregated analysis was performed. In the BRAC intervention villages, no gender difference in NER was observed in 2011 but it was noticed in 2013 in favour of the girls. Otherwise, no significant gender difference in pre-primary NER was observed in any of the years in the non-intervention villages. Statistically significant changes in NER were noticed from 2011 to 2013 among both boys and girls in the intervention villages (Table 4.1). However, it was not the case in the non-intervention villages. In the intervention villages, NER increased from 11.8% in 2011 to 20.3% in 2013 ( $p < 0.001$ ) for boys and 11.9% in 2011 to 27.3% in 2013 for girls ( $p < 0.001$ ).

Whereas, the increase was 8.5 percentage points for the boys it was 15.4 percentage points for the girls. As the increase in the non-intervention villages was 0.9 percentage points for each, the gain due to BRAC intervention was 7.6 percentage points (8.5 – 0.9) for the boys and 14.5 percentage points (15.4 – 0.9) for the girls. Thus, the girls gained more than the boys due to the pre-primary intervention of BRAC.

**Table 4.1 Net enrolment rate among children 4–5 years by village type, gender and year (definition 1)**

Village type & gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	11.9 (3,945)	23.7 (1,353)	11.8	p<0.001
Non-intervention	11.0 (2,205)	11.9 (1,449)	0.9	ns
Level of significance	ns	p<0.001		
<i>Boys</i>				
Intervention	11.8 (2,019)	20.3 (693)	8.5	p<0.001
Non-intervention	9.8 (1,164)	10.7 (758)	0.9	ns
Level of significance	ns	p<0.001		
<i>Girls</i>				
Intervention	11.9 (230)	27.3 (660)	15.4	p<0.001
Non-intervention	12.4 (1,041)	13.3 (691)	0.9	ns
Level of significance	ns	p<0.001		

Analyses were also done using the other definitions and provided in Annexes 4.1 to 4.3. Following are the summary observations.

- According to the second definition, the gain was 12.7 percentage points for the boys [(32.6 – 16.7) – (17.6 – 14.4)] and 20.4 percentage points for the girls [(41.1 – 17.2) – (22.3 – 18.8)].
- In terms of the third definition, the gain was 8.3 percentage points for the boys [(17.5 – 5.0) – (7.3 – 3.1)] and 11.4 percentage points for the girls [(23.5 – 6.1) – (9.7 – 3.7)].
- In terms of the fourth definition, the gain was 13.4 percentage points for the boys [(28.0 – 7.1) – (11.4 – 3.9)] and 16.7 percentage points for the girls [(34.9 – 9.0) – (15.4 – 6.2)].

Location-wise analysis shows no difference between the intervention and non-intervention villages of plain land and tea-estate/hilly areas in 2011 (Table 4.2). Two years later, in 2013, a statistically significant difference between them was noticed in the plain land but not in the tea-estate/hilly areas. On the other hand, in *haor* areas, intervention villages were ahead of the non-intervention villages in both the years. Statistically significant increase in pre-primary NER was noticed in the intervention villages of all three locations. The rate increased by 12.1 percentage points in the plain land, 11.9 percentage points in the *haor* area and 12.4 percentage points in the tea-estate/hilly areas. On the other hand, although the rate changed a bit in all the three locations in the non-intervention villages, no significant difference was observed in any of them. The rate increased by 1.4 and 4.4 percentage points in the plain land and tea-estate/hilly areas respectively but decreased by 0.1 percentage points in the *haor* areas. The gain due to BPPS intervention was 10.7 percentage points (12.1 – 1.4) in the plain land, 12 percentage points (11.9 + 0.1) in the *haor* areas, and eight percentage points (12.4 – 4.4) in the tea-estate/hilly areas.

**Table 4.2 Net enrolment rate among children 4–5 years by village type, location and year (definition 1)**

Village type & location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	10.5 (2358)	22.6 (868)	12.1	p<0.001
Non-intervention	11.9 (1271)	13.3 (631)	1.4	ns
Level of significance	ns	p<0.001		
<i>Haor area</i>				
Intervention	14.2 (1411)	26.1 (422)	11.9	p<0.001
Non-intervention	9.6 (726)	9.5 (611)	-0.1	ns
Level of significance	p<0.01	p<0.001		
<i>Tea-estates/hilly</i>				
Intervention	11.4 (176)	23.8 (63)	12.4	p<0.05
Non-intervention	10.6 (208)	15.0 (207)	4.4	ns
Level of significance	ns	ns		

Analyses were also done using the other definitions and provided in Annexes 4.4 to 4.6. Following are the summary observations.

- In terms of the second definition, the gain was 15.9 percentage points in the plain land (19.3 – 3.4), 20.5 percentage points in the *haor* areas (21.9 – 1.4) and 8.3 percentage points in the tea estates/hilly areas (18.6 – 10.3).
- In terms of the third definition, the gain was 6.9 percentage points in the plain land (13.8 – 6.9), 13.4 percentage points in the *haor* areas (17.3 – 3.9) and 10.5 percentage points in the tea estates/hilly areas (11.0 – 0.5).
- In terms of the second definition, the gain was 11.3 percentage points in the plain land (21.3 – 10.3), 22.3 percentage points in the *haor* areas (28.6 – 6.3) and 11.8 percentage points in the tea estates/hilly areas (15.6 – 3.8).

## 4.2 GROSS ENROLMENT RATIO

Gross enrolment ratio (GER) at pre-primary level was found much higher than the net enrolment rate. GER refers to the number of children currently enrolled in pre-primary education against every 100 children of age 4–5 years. Overall, GER was less in the non-intervention villages than in the intervention villages both in 2011 and 2013 (Table 4.3). Although improvement in GER during 2011–2013 was observed in both types of villages it was more in the intervention villages compared to the non-intervention villages. Improvement in GER was 36 percentage points (57.1 – 21.1) in the intervention villages, it was 14.7 percentage points (29.7 – 15.0) in the non-intervention villages. Thus, overall gain in GER due to BPPS intervention was 21.3 percentage points (36.0 – 14.7). A similar story could be made for boys and girls separately. In summary, the gain in GER was 19.7 percentage points among the boys (33.9 – 14.2) and 22.9 percentage points among the girls (38.2 – 15.3).

**Table 4.3 Gross enrolment ratio at pre-primary level by village type, gender and year**

Village type & gender	Year		Change
	2011	2013	
<i>All</i>			
Intervention	21.1	57.1	36.0
Non-intervention	15.0	29.7	14.7
<i>Boys</i>			
Intervention	20.2	54.1	33.9
Non-intervention	13.4	27.6	14.2
<i>Girls</i>			
Intervention	22.1	60.3	38.2
Non-intervention	16.7	32.0	15.3

GER increased in the intervention villages of all three locations and in the non-intervention villages of plain land and *haor* areas but decreased in the non-intervention villages of tea-estate/hilly areas (Table 4.4). Note that GER was already much higher in the base year (2011) in both the intervention and non-intervention villages of tea-estates/hilly areas. In the plain land, increase in pre-primary GER recorded 32.7 percentage points in the intervention villages and 28.1 percentage points in the non-intervention villages. Thus, it increased 4.6 percentage points more in the BPPS intervention villages in plain land. This was much higher in *haor* areas and tea-estates/hilly areas; respectively 37.8 (45.2 – 7.4) and 27 (9.3 + 17.7) percentage points. Increase of pre-primary GER in the non-intervention villages of plain land was tremendous.

**Table 4.4 Gross enrolment ratio at pre-primary level by location, village type and year**

Village type and location	Year		Change
	2011	2013	
<i>Plain land</i>			
Intervention	23.9	56.6	32.7
Non-intervention	10.9	39.0	28.1
<i>Haor area</i>			
Intervention	12.9	58.1	45.2
Non-intervention	14.2	21.6	7.4
<i>Tea-estates/hilly</i>			
Intervention	49.4	58.7	9.3
Non-intervention	42.8	25.1	-17.7

Much higher GER was observed when the children of age five years were considered as denominator (Annexes 4.7 and 4.8). It was because the numerator was the same in both the cases but the denominator was smaller for five years age cohort than 4–5 years age group. In 2011, GER was 35.5% in the intervention and 27.7% in the non-intervention villages. The ratios increased respectively to 104.7% and 58.3% in 2013. Overall, the gain due to BPPS intervention was 38.6 percentage points (69.2 – 30.6). In the same way, it was 39.2 percentage points for the boys and 38 percentage points for the girls. Area-wise, the gain was 10.9 percentage points in the plain land, 66.7 percentage points in the *haor* areas and 45.7 percentage points in the tea estates/hilly areas. Rest of the analyses was mostly done following the first definition as it was used in the baseline data analysis (Nath 2013).

### Age distribution of students

Age distribution of pre-primary students in the intervention villages is provided in Table 4.5. Age of the students varied from 4–11 years. Percentage of students of age 6 years and below increased during 2011–2013 and it decreased in other age cohorts. Whereas, in 2011, 54.4% of the pre-primary students were of age 4–6 years, it increased to 66.6% in 2013. This means that proportion of over aged children who were supposed to enrol in primary classes decreased overtime. Proportion of pre-primary aged children (4–5 years) in pre-primary class increased from 26.3% in 2011 to 35.7% in 2013. However, still 64.3% of the pre-primary students were from primary age group (6 years and above). Note that BRAC policy was to admit the children of age 5–6 years in its pre-primary schools.

**Table 4.5 Percentage distribution of pre-primary students of intervention villages by age and year**

Age	Year		Change
	2011	2013	
4y	3.6	5.7	2.1
5y	22.7	30.0	7.3
6y	28.1	30.9	2.8
7y	30.0	23.3	-6.7
8y+	15.6	10.1	-5.5
Total	100.0	100.0	

## Students' distribution by school type

Eight types of schools were found offering pre-primary education in the BPPS intervention villages. These were BRAC pre-primary school, other NGO operated pre-primary school, government primary school, non-government primary school, other NGO operated primary school, madrasa, kindergarten and mosque based pre-primary school. Percentage distribution of pre-primary students by type of schools allows seeing how far it changes in the share of students by various types of schools as a result of increase in enrolment.

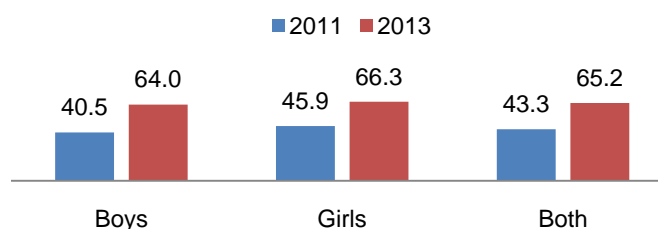
Share of pre-primary students increased in four types of schools during 2011–2013 (Table 4.6). These are BRAC pre-primary school, other NGO operated pre-primary school, non-government primary school and madrasa. Of them, the largest change occurred in BRAC pre-primary school and changes were very small in other three types of schools. It should be mentioned that BRAC pre-primary schools had the largest share in 2011 too with 43.3% of the students enrolling there. BRAC schools continued to be at the top until 2013 with a greater share of 65.2%. This means that share of BRAC schools increased 21.9 percentage points in its intervention villages. Share of students not only decreased in the government primary and mosque based pre-primary schools but also in other NGO operated primary schools and kindergartens. The above changes could not change much in relative importance of the school types in terms of their share in pre-primary education.

**Table 4.6 Percentage distribution of pre-primary students of intervention villages by school type and year**

School type	Year		Change
	2011	2013	
BRAC pre-primary	43.3	65.2	21.9
Other NGO pre-primary	1.9	4.0	2.1
Mosque based pre-primary	15.7	9.3	-6.4
Government primary	18.9	10.1	-8.8
Non-government primary	1.2	2.1	0.9
Other NGO primary	7.5	1.2	-6.3
Madrasa	0.4	1.9	1.5
Kindergarten	11.2	6.2	-5.0
Total	100.0	100.0	

Gender-wise analysis of percentage share of students by school type was carried out. It shows that BRAC schools share increased 23.5 percentage points (40.5% in 2011 to 64% in 2013) among the boys and 20.4 percentage points (45.9% in 2011 to 66.3% in 2013) among the girls (Figure 4.2). BRAC's greatest contribution was noticed in both the years as well as among the children of both genders.

**Figure 4.2 Percentage share of pre-primary students in BRAC schools by gender and year**



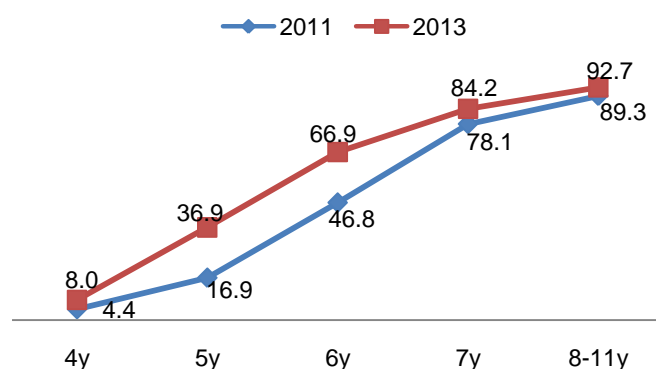
## 4.3 SOCIOECONOMIC DIFFERENTIALS OF ENROLMENT

### Age specific net enrolment rate

Age specific net enrolment rate of children of age 4–11 years (because this is the age range of pre-primary students in the study areas) in the BPPS intervention villages for 2011 and 2013 are provided in Figure 4.3. Gradual increase in the rate was observed

in both the years. Although, NER increased from 2011 to 2013 in each age cohort major increase was noticed in two specific age cohorts viz., five and six years. It may be noted that BRAC's pre-primary intervention was specifically targeted to these two age cohorts. The NER of children of age five years increased from 16.9% in 2011 to 36.9% in 2013 and it increased from 46.8% in 2011 to 66.9% in 2013 for those of age six years. In both cases, the amount of increase was about 20 percentage points. Not much change was noticed in NER in any of the age cohort in the non-intervention villages.

**Figure 4.3 Age specific net enrolment rate in BPPS intervention villages by year**



### Parental education and enrolment

Table 4.7 provides net enrolment rate of children of age 4–5 years in terms of various levels of education of fathers and mothers separately. In 2011, statistically significant variation in NER of these children was observed in terms of variation in parental education. No such variation existed after two years of BRAC intervention through its pre-primary schools. This may be considered as a success over two years for two reasons. First, children in these areas admitted in pre-primary education irrespective of the level of parental education gives a sense of equity. Second, children with lower level of parental education increased more. Parental education was categorized into four groups for analysis purpose. These are nil, incomplete primary (classes I-IV), primary completed but incomplete secondary (classes V-IX) and secondary completed (classes X and above). Increase in pre-primary NER was observed in all four groups of parental education but it was higher in the first and the third groups. Statistically significant improvement in pre-primary NER was observed in the first three groups of parental education.

**Table 4.7 Pre-primary net enrolment rate in the intervention villages by parental educational level and year**

Level of education	Year		Change	Level of significance
	2011	2013		
<i>Fathers education</i>				
Nil	10.2	22.3	12.1	p<0.001
≤ class 4	14.5	22.7	8.2	p<0.01
Classes 5-9	13.6	26.7	13.1	p<0.001
Class 10+	15.6	22.2	6.6	ns
Level of significance	p<0.01	ns		
<i>Mothers education</i>				
Nil	10.1	24.3	14.2	p<0.001
≤ class 4	13.9	20.8	6.9	p<0.01
Classes 5-9	13.4	24.8	11.4	p<0.001
Class 10+	18.1	23.1	5.0	ns
Level of significance	p<0.01	ns		

Enrolment situation of children was also analysed combining level of education of both mother and father. NER was 9.7% in 2011 among the children who had both never schooled parents and it increased to 25.1% in 2013. Increase in enrolment of these children was 15.4 percentage points over two years. Similarly, the increase was found 13 percentage points among those who had one parent without completing primary education and the other completed primary education but not secondary. It was 12.1 percentage points if both the parents completed primary education but not secondary.

### Household food security status and enrolment

Pre-primary NER significantly increased in the intervention villages with the increase in food security status of the households (Table 4.8). In 2011, the rate was 9.7% among the children of *always in deficit* households which gradually increased to 16.4% among those of the *surplus* households ( $p<0.001$ ). The rates were respectively 17.4% and 27.4% in 2013 ( $p<0.001$ ). Statistically significant increase in NER from 2011 to 2013 was observed in all the four categories of households. For instance, NER increased 7.7 percentage points among the children of *always in deficit* households, 10.1 percentage points among those in *sometimes in deficit* households, 12.8 percentage points among those in *breakeven* households and 11 percentage points among those in *surplus* households.

**Table 4.8 Pre-primary net enrolment rate in intervention villages by self-perceived food security status and year**

Food security status	Year		Change	Level of significance
	2011	2013		
Always in deficit	9.7	17.4	7.7	$p<0.05$
Sometimes in deficit	10.9	21.0	10.1	$p<0.001$
Breakeven	12.2	25.0	12.8	$P<0.001$
Surplus	16.4	27.4	11.0	$P<0.001$
Level of significance	$p<0.001$	$p<0.001$		

Similar analysis for the non-intervention villages shows that during 2011–2013 the NER increased 5.2 percentage points among the children of *always in deficit* households and 0.5 percentage points among those in *sometimes in deficit* households. On the other hand, it decreased by one percentage point among the children of *breakeven* households and four percentage points among those in *surplus* households. Thus, gain in pre-primary enrolment due to BRAC intervention was least in *always in deficit* households (2.5 percentage points) and most in *surplus* households (15 percentage points). It was 9.6 percentage points in *sometimes in deficit* households and 13.8 percentage points in *breakeven* households. These findings seem to be contradictory to the earlier findings. In fact rural economy in marginalized areas might not be very much linked to educational attainment.

### Households' labour sale status and enrolment

At least one person of a household selling manual labour for at least 100 days a year was categorized as labour selling household. In the intervention villages, no statistically significant difference was observed in pre-primary NER in terms of labour selling status of the households in any of the study year (Table 4.9). However, in the non-intervention villages the labour selling households were lagging behind the other households in both the years. In terms of change in pre-primary NER during 2011–2013, significant improvement was noticed in both types of households of the intervention villages only. NER increased 10.8 percentage points (11.1% in 2011 to

21.9% in 2013) in the labour selling households and 13.5 percentage points (12.4% in 2011 to 25.9% in 2013) in the non-labour selling households. Small improvement was noticed in the non-intervention villages; 0.9 percentage points in labour selling households and 2.2 percentage points in non-labour selling households. Thus, gain due to BPPS intervention was (10.8 – 0.9) 9.9 percentage points in the labour selling households and (13.5 – 2.2) 11.3 percentage points in non-labour selling households.

**Table 4.9 Pre-primary net enrolment rate of the children by village type, labour sell status and year**

Labour sale status of HH	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Sell labour	11.1	21.9	10.8	p<0.001
Don't sell	12.4	25.9	13.5	p<0.001
Level of significance	ns	ns		
<i>Non-intervention villages</i>				
Sell labour	9.0	9.9	0.9	ns
Don't sell	12.9	15.1	2.2	ns
Level of significance	p<0.01	p<0.01		

#### Availability of electricity at home and enrolment

In 2011, availability of electricity at home had positive relationship with pre-primary enrolment in both the intervention and non-intervention villages (Table 4.10). NER was higher for the children of those households who had electricity at home compared to those who had no such facility. Statistically significant improvement in pre-primary NER during 2011–2013 was observed only in the intervention villages irrespective of availability of electricity at home. Increase was recorded 15.5 percentage points among the children who had electricity at home and 6.1 percentage points among those who had not. On the other hand, in the non-intervention villages, although the rate increased by 1.3 percentage points among the children who had no electricity at home but it decreased by 1.8 percentage points among those who had electricity at home. Thus, gain in pre-primary NER due to BRAC intervention was 17.3 percentage points (15.5 + 1.8) among the children having electricity at home and 4.8 percentage points (6.1 – 1.3) among those who had no such facility.

**Table 4.10 Pre-primary net enrolment rate by village type, availability of electricity at home and year**

Availability of electricity at home	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Available	13.7	29.2	15.5	p<0.001
Not available	10.2	16.3	6.1	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Non-intervention villages</i>				
Available	15.1	13.3	-1.8	ns
Not available	9.2	10.5	1.3	ns
Level of significance	p<0.001	ns		

#### Religion and enrolment

No significant difference in pre-primary NER was observed between Muslim and non-Muslim children in any of the years (Table 4.11). Significant increase in NER from 2011 to 2013 was observed among the children of both groups in the BRAC

intervention villages. This was not the case in the non-intervention villages. In the intervention villages, the NER increased 11.5 percentage points among the Muslims (12% in 2011 to 23.5% in 2013) and 15.8 percentage points among the non-Muslims (10.2% in 2011 to 26% in 2013). These were respectively 0.1 and 4.8 percentage points in the non-intervention villages. Thus, overall gain due to BRAC intervention was 11.4 percentage points (11.5 – 0.1) for the Muslims and 11 percentage points (15.8 – 4.8) for the non-Muslims.

**Table 4.11 Pre-primary net enrolment rate by village type, religion and year**

Religion	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Muslim	12.0	23.5	11.5	p<0.001
Non-Muslim	10.2	26.0	15.8	p<0.001
Level of significance	ns	ns		
<i>Non-intervention villages</i>				
Muslim	11.3	11.4	0.1	ns
Non-Muslim	9.7	14.5	4.8	ns
Level of significance	ns	ns		

Village-wise analysis shows that of the 48 intervention villages, the pre-primary NER increased in 35 villages. In other words, increase was noticed in 72.9% of the intervention villages. This was 46% in the non-intervention villages. Overall, the NER decreased in 27.1% of the villages, it increased 0.01–10% in 18.7% of the villages, 10.1–20% in a quarter of the villages and 20.1% or more in 29.2% of the villages. Highest increase was recorded as 64.3 percentage points in a village. It was 40% or more in five villages (over 10%). The highest decrease was recorded 16.4 percentage points in a village.

#### 4.4 COMPARISON OF PRE-PRIMARY STUDENTS' BACKGROUND

An attempt was made in this section to compare background information of BRAC pre-primary school students of 2013 with those of other types of school. Overall, 51.5% of pre-primary students were girls; 52.4% among those of BRAC pre-primary schools and 49.8% among those in other schools (Table 4.12). Although, no statistical difference was observed between these two figures, girls' share in BRAC pre-primary schools

was 2.6 percentage points higher than other schools. No difference was also noticed between these two groups of students in terms of their mean age (about six years each). However, some differences were noticed in age distribution. Other schools were ahead of BRAC schools in admitting more students of ages four and 7–11 years. On the other hand, BRAC schools admitted more students of age 5–6 years compared to other types. BRAC pre-primary schools

**Table 4.12 Comparison of BRAC and other schools in gender and age distribution of pre-primary students**

Age and gender	School type		Overall
	BRAC	Others	
% of girls	52.4	49.8	51.5
<i>Age</i>			
4y	4.8	7.4	5.7
5y	32.1	26.0	30.0
6y	31.9	29.0	30.9
7y	21.8	26.0	23.3
8–11y	9.3	11.5	10.1
All	100.0	100.0	100.0
Mean age (y)	6.0	6.2	6.1

admitted 64% of its students from age group 5–6 years which was 55% in the case of other schools. Note that BRAC intended to admit the children of this age group. So, 36% of BRAC school students were from outside the targeted age-cohort.

Statistically, no difference was noticed between BRAC pre-primary schools and the other pre-primary providers in terms of admitting first generation learners (Table 4.13). About a third of the students of BRAC and other schools were first generation learners. Both the parents of these students had never been to school. Separately, over 53% of the fathers and 42.7% of the mothers of BRAC pre-primary school students never went to school. These figures were respectively 58.1 and 40.1% in the case of other schools.

Proportions of students from households with *deficit* food security status was significantly lower in BRAC schools compared to that in other schools (36.1% vs. 43.5%;  $p < 0.05$ ). However, no difference was noticed between these two groups of students in terms of manual labour selling characteristics of their households or having electricity at home. Although 8.1% of the students of BRAC schools and 5.2% of students in other schools belonged to non-Muslim communities, no statistical difference was found between the figures. It was observed that 12.2% of the population in the intervention villages were non-Muslims. This seems that non-Muslims were less likely to send their children to pre-primary school.

**Table 4.13 Comparison of BRAC pre-primary and other schools by students' socioeconomic characteristics**

Socioeconomic characteristics	School type		Overall	Level of significance
	BRAC	Others		
Never schooled fathers	53.1	58.1	54.8	ns
Never schooled mothers	42.7	40.1	41.8	ns
First generation students	31.9	32.8	32.2	ns
Deficit household	36.1	43.5	38.7	$p < 0.05$
Labour sale household	54.4	55.8	54.9	ns
Having electricity at home	65.3	61.3	63.9	ns
Non-Muslim	8.1	5.2	7.1	ns

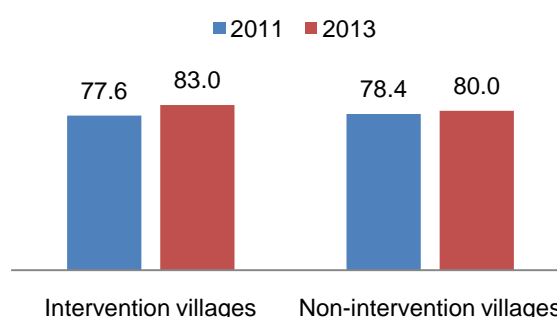
## 5 CHANGES IN PRIMARY ENROLMENT

This chapter presents changes in primary enrolment rate due to BRAC intervention during 2012–13 through its non-formal primary schools (BRAC primary schools or BPS). These include schools both directly operated by BRAC and through the ESP. Thus, comparison of non-intervention villages (50 nos.) with those having BPS intervention (77 nos.) is the main focus of this chapter.

### 5.1 NET ENROLMENT RATE

According to the compulsory primary education act 1990, children of age 6–10 years are eligible to enrol in primary classes. Primary net enrolment rate (NER) is the percentage of children currently enrolled in any grade among those aged 6–10 years. The NER in the BPS intervention villages was 77.6% in 2011 which increased to 83% in 2013 – a change of 5.4 percentage points over two years (Figure 5.1 and Table 5.1). On the other hand, increase in primary NER was only 1.6 percentage points in the non-intervention villages; from 78.4% in 2011 to 80.0% in 2013. Although the change in NER was statistically significant (at  $p < 0.001$ ) in the intervention villages but no such difference was observed in the non-intervention villages. Although no statistically significant difference in NER was observed in the two types of villages in 2011 but due to BRAC intervention difference was observed in 2013 in favour of the intervention villages. Overall, the gain of the programme due to BPS intervention was 3.8 percentage points (5.4 – 1.6).

**Figure 5.1 Primary net enrolment rate by village type and year**



**Table 5.1 Net enrolment rate among children 6–10 years by village type, gender and year**

Village type & gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	77.6 (17,196)	83.0 (5,994)	5.4	$p < 0.001$
Non-intervention	78.4 (6,078)	80.0 (3,805)	1.6	ns
Level of significance	ns	$p < 0.001$		
<i>Boys</i>				
Intervention	75.5 (8,702)	80.9 (3,037)	5.4	$p < 0.001$
Non-intervention	76.1 (3,087)	77.4 (1,993)	1.3	ns
Level of significance	ns	$p < 0.01$		
<i>Girls</i>				
Intervention	79.8 (8,494)	85.2 (2,957)	5.4	$p < 0.001$
Non-intervention	80.8 (2,991)	82.9 (1,812)	2.1	ns
Level of significance	ns	$p < 0.05$		

Gender-wise analysis of NER was carried out. Girls were significantly ( $p < 0.001$ ) ahead of boys in both the intervention and non-intervention villages in both the years. Statistically significant increase in enrolment was observed among the children of both genders of intervention villages only ( $p < 0.001$ ) but not in the non-intervention villages (Table 5.1). In the intervention villages, increase in NER from 2011 to 2013 was equal for boys and girls – 5.4 percentage points each. In the non-intervention villages, it was slightly higher among the girls than boys –2.1 and 1.3 percentage points respectively. Thus, overall gain, due to BRAC intervention, was 3.3 percentage points (5.4 – 2.1) for the girls and 4.1 percentage points (5.4 – 1.3) for the boys.

Statistically significant increase in primary NER from 2011 to 2013 was observed in the intervention villages of all three locations (Table 5.2). However, the level of increase was different; 6.2 percentage points in plain land, 4.1 percentage points in *haor* area and 3.8 percentage points in tea-estates/hilly areas. A mixed result was observed in the non-intervention villages. For instance, NER increased by 1.6 percentage points in the plain land and by 10.3 percentage points in the tea-estates/hilly areas but decreased by 1.8 percentage points in *haor* areas. Thus, overall gain was 4.6 percentage points in the plain land and 5.9 percentage points in the *haor* area. As in the tea-estates/hilly areas, increase in NER was more in the non-intervention villages than the intervention villages; a negative gain was observed there (6.5 percentage points).

**Table 5.2 Net enrolment rate among children 6–10 years by village type, location and year**

Village type & location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	77.9 (9,673)	84.1 (3,469)	6.2	$p < 0.001$
Non-intervention	77.7 (3,631)	79.3 (1,772)	1.6	ns
Level of significance	ns	$p < 0.01$		
<i>Haor area</i>				
Intervention	77.7 (5,118)	81.8 (1,891)	4.1	$p < 0.001$
Non-intervention	81.0 (1,923)	79.2 (1,485)	-1.8	ns
Level of significance	$p < 0.01$	ns		
<i>Tea-estates/hilly</i>				
Intervention	76.5 (2,405)	80.3 (634)	3.8	$p < 0.05$
Non-intervention	74.0 (524)	84.3 (548)	10.3	$p < 0.001$
Level of significance	ns	ns		

Real primary NER was calculated. It is the percentage of children currently enrolled in any grade of primary education (Grades I to V) among those aged 6–10 years. No change in the rate was observed in the intervention villages from 2011 to 2013. The rate was about 68.5% in both years. On the other hand, in the non-intervention villages, the rate decreased by 3.3 percentage points between the periods – from 70.9% in 2011 to 67.6% in 2013. The same was observed when data were analyzed by gender.

#### **Net enrolment rate in villages under campaign activities**

Since 2011 BRAC also initiated campaign activities in collaboration with FIDVB in the Sylhet division. This activity aimed to increase awareness among parents and community to enrol their children in primary schools. Therefore, comparison of NER has been done between villages with campaign and without campaign activities.

During the study period two unions under Baniachang and Nabiganj *upazilas* were brought under the campaign for education. Statistically significant increase was observed in both type of villages but the increase in NER was higher in the campaign villages than the non-campaign villages (Table 5.3).

**Table 5.3 Net enrolment rate in the intervention villages of Baniachang and Nabiganj *upazilas* by campaign status and year**

Campaign status	Year		Increased	Level of significance
	2011	2013		
Non-campaign villages	77.7	83.3	5.3	p<0.001
Campaign villages	75.8	83.1	7.3	p<0.05

## 5.2 GROSS ENROLMENT RATIO

The primary gross enrolment ratio (GER) is a ratio of number of primary school students (grades I–V) and primary school aged children (6–10 years) expressed in percentage. In 2011, the GER was 95.5 and 97.0 in the intervention and non-intervention villages respectively (Table 5.4). This increased to respectively 103.4 and 99.6 in 2013. Thus, increase in GER, between the two time periods, was 7.9 percentage points in the intervention villages and 2.6 percentage points in the non-intervention villages. Overall gain due to BRAC intervention was 5.3

**Table 5.4 Gross enrolment ratio at primary level by village type, gender and year**

Village type & gender	Year		Change
	2011	2013	
<i>All</i>			
Intervention	95.5	103.4	7.9
Non-intervention	97.0	99.6	2.6
<i>Boys</i>			
Intervention	91.2	97.5	6.3
Non-intervention	90.9	92.0	1.1
<i>Girls</i>			
Intervention	99.8	109.5	9.7
Non-intervention	103.5	107.9	4.4

percentage points (7.9 – 2.6); 5.2 percentage points (6.3 – 1.1) among the boys and 5.3 percentage points (9.7 – 4.4) among the girls.

Increase in GER was observed in the intervention villages of all the three locations (Table 5.5). In the plain land, it increased from 94.1 in 2011 to 101.3 in 2013 and in the *haor* area it changed from 99.8 in 2011 to 106.8 in 2013. The amount of increase was 7.2 percentage points in the plain land and seven percentage points in the *haor* area. A reverse scenario was observed in the non-intervention villages of these two locations. Whereas, 1.2 percentage points decrease in GER was noticed in the non-intervention villages of the plain land, an increase of 2.8 percentage points was recorded in similar villages of the *haor* area. Thus, overall gain due to BRAC intervention was 8.4

**Table 5.5 Gross enrolment ratio at primary level by location, village type and year**

Village type and location	Year		Change
	2011	2013	
<i>Plain land</i>			
Intervention	94.1	101.3	7.2
Non-intervention	96.9	95.7	-1.2
<i>Haor area</i>			
Intervention	99.8	106.8	7.0
Non-intervention	99.5	102.3	2.8
<i>Tea-estates/hilly</i>			
Intervention	92.1	104.9	12.8
Non-intervention	89.5	104.7	15.2

percentage points in the plain land (7.2 + 1.2) and 4.2 percentage points in the *haor* area (7.0 – 2.8).

A much higher increase in GER was noticed during 2011-13 in both types of villages in the tea-estate/hilly areas; 12.8 percentage points in the intervention villages and 15.2 percentage points in the non-intervention villages. Although in 2011, GER was lower in the non-intervention villages than that of the intervention villages, it was mostly similar in 2013.

### Age distribution of students

Age distribution of primary students in the intervention villages is provided in Table 5.6. It shows that from 2011 to 2013 percentage of students of age 10 years or below decreased in the primary classes but percentage of students of age 11 years and above increased during the same period. It was good to see that proportion of pre-primary aged (4–5 years) students in primary classes decreased over time. Unfortunately, primary aged (6–10 years) students' also decreased (5.7 percentage points). Although BRAC intended to admit children of age 8–10 years in its primary schools, no change was noticed in this particular age group. There is a possibility that BRAC might have admitted over-aged children (11 years+) in BPS.

**Table 5.6 Percentage distribution of primary students of intervention villages by age and year**

Age	Year		Change
	2011	2013	
4–5y	2.2	0.6	-1.6
6–7y	19.1	15.0	-4.1
8–10y	52.7	51.1	-1.6
11–12y	19.8	25.1	5.3
13–16y	6.1	8.1	2.0
Total	100.0	100.0	

### Distribution by school type

Similar to the rest of the country, in 2011, primary education in the eight study *upazilas* was dominated by the government primary schools followed by non-government primary schools in both the intervention and non-intervention villages. Dominance of government primary schools continued in both types of villages in 2013 too but the non-government schools lost their dominance in the intervention villages which was taken over by BRAC primary schools (Table 5.7). Whereas, in the intervention villages, the share of the government and non-government primary schools was 56.8 and 18.2% respectively in 2011, the figures declined to 39.9 and 12% respectively in 2013. On the other hand, share of BRAC primary schools increased from 10.4% in 2011 to 29.1% in 2013. This means that whereas share of the government and non-government schools declined 16.9 and 6.2 percentage points respectively over the two years which raised 18.7 percentage points for BRAC primary schools. Although a small increase was noticed in other types of schools (altogether 4.4 percentage points), the increase in BRAC schools was unparalleled. Share of BRAC schools increased 17.5 percentage

**Table 5.7 Percentage distribution of primary students (grades I-V) of intervention villages by school type and year**

School type	Year		Change
	2011	2013	
Government primary	56.8	39.9	-16.9
Non-govt. primary	18.2	12.0	-6.2
BRAC primary	10.4	29.1	18.7
Other NGO primary	7.5	9.7	2.2
Ebtedayee madrasa	1.0	1.2	0.2
High madrasa	4.1	4.4	0.3
Kindergarten	2.0	2.9	0.9
High school	0.0	0.8	0.8
Total	100.0	100.0	

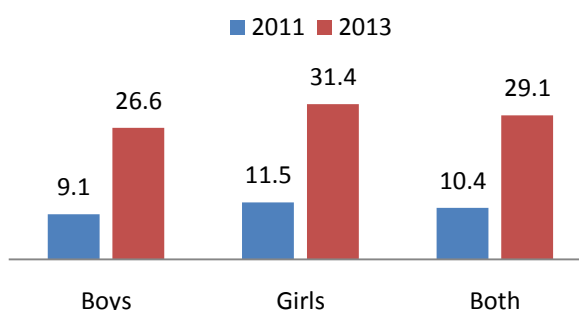
points (9.1% in 2011 to 26.6% in 2013) among the boys and 19.9 percentage points (11.5% in 2011 to 31.4% in 2013) among the girls (Figure 5.2).

### 5.3 SOCIOECONOMIC DIFFERENTIALS OF ENROLMENT

#### Age specific net enrolment rate

Age specific net enrolment rate of the children of age 6–12 years of the intervention villages for 2011 and 2013 are presented in Figure 5.3. The analysis was extended to 12 years because a quarter of the primary students were found in 11–12 years age group (Table 5.6). The NER increased among the children of every single age; however, highest increase was recorded in age six. Increase of NER in every age was observed among the children of both genders. In age six, whereas NER increased 6.5 percentage points among the boys it increased 10.7 percentage points among the girls.

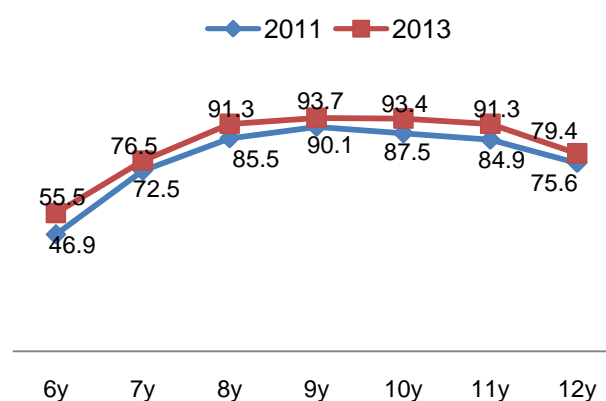
**Figure 5.2 Percentage of primary students in BRAC schools by gender and year**



#### Parental education and enrolment

The primary net enrolment rate significantly increased with the increase in parental education in both types of villages and in both the years (Table 5.8). For analysis purpose, years of schooling completed by the parents were categorized into four groups; these are nil, incomplete primary (classes I-IV), primary completed but incomplete secondary (classes V-IX) and secondary completed (classes X and above). Due to BRAC intervention, the primary NER increased among the children of all four groups of parental education. However, the magnitude of change decreased with the increase of parental education. For instance, the NER increased 6.3 percentage points among those children whose fathers had no education, 3.4 percentage points among those children whose fathers had incomplete primary education, three percentage points among those whose fathers had incomplete secondary education and 2.6 percentage points among those whose fathers had completed secondary education. Against similar levels of mothers' education, the corresponding figures were 5.9, 4.2, 1.6, and 1.6 percentage points respectively. Change between 2011 and 2013 was statistically significant for the first three categories of fathers and first two categories of mothers. The above findings indicate that BRAC's intervention was most likely focussed towards those children who had parents with lower level of education.

**Figure 5.3 Age specific net enrolment rate by year**



the primary NER increased among the children of all four groups of parental education. However, the magnitude of change decreased with the increase of parental education. For instance, the NER increased 6.3 percentage points among those children whose fathers had no education, 3.4 percentage points among those children whose fathers had incomplete primary education, three percentage points among those whose fathers had incomplete secondary education and 2.6 percentage points among those whose fathers had completed secondary education. Against similar levels of mothers' education, the corresponding figures were 5.9, 4.2, 1.6, and 1.6 percentage points respectively. Change between 2011 and 2013 was statistically significant for the first three categories of fathers and first two categories of mothers. The above findings indicate that BRAC's intervention was most likely focussed towards those children who had parents with lower level of education.

A similar result was found when education of both parents was combined. Percentage of increase from 2011 to 2013 was most among those children who had both or at least one parent without schooling. NER of these children increased at least six percentage points over two years. Comparing the changes between intervention and non-intervention villages, it can be said that due to BRAC intervention NER increased 4.5 percentage points among the children of never schooled parents; in other words, among the first generation learners. BRAC's contribution was 1.8 percentage points among those from at least one parent without schooling.

**Table 5.8 Primary net enrolment rate in the intervention villages by parental educational level and year**

Level of education	Year		Change	Level of significance
	2011	2013		
<i>Fathers education</i>				
Nil	73.5	79.8	6.3	p<0.001
≤ class 4	81.2	84.6	3.4	p<0.05
Classes 5-9	84.9	87.9	3.0	p<0.01
Class 10+	91.2	93.8	2.6	ns
Level of significance	p<0.001	p<0.001		
<i>Mothers education</i>				
Nil	74.0	79.9	5.9	p<0.001
≤ class 4	80.8	85.0	4.2	p<0.01
Classes 5-9	85.5	87.1	1.6	ns
Class 10+	91.4	93.0	1.6	ns
Level of significance	p<0.001	p<0.001		

### Household food security status and enrolment

The primary NER significantly increased in the intervention villages with the increase in self-perceived food security status of households. Increase in NER from 2011 to 2013 was observed in the first three categories of food security status (Table 5.9). However, the magnitude of increase was more among those with *deficit* food security status compared to those from *breakeven* and *surplus* households. During 2011-13, NER increased 7.8 percentage points among the children from *always in deficit* households (71% in 2011 to 78.8% in 2013) and 6.5 percentage points among those from *sometimes in deficit* households (76.2% in 2011 to 82.7% in 2013). Although, the rate increased by 2.5 percentage points in *breakeven* households it decreased by about one percentage points in *surplus* households.

**Table 5.9 Primary net enrolment rate of the children of intervention villages by self-perceived food security status and year**

Food security status	Year		Change	Level of significance
	2011	2013		
Always in deficit	71.0	78.8	7.8	p<0.01
Sometimes in deficit	76.2	82.7	6.5	p<0.001
Breakeven	80.2	82.7	2.5	p<0.05
Surplus	86.1	85.2	-0.9	ns
Level of significance	p<0.001	p<0.01		

Further analysis of data shows that whereas in the intervention villages the NER increased 7.8 percentage points among those from *always in deficit* households it decreased 1.5 percentage points among the similar population of non-intervention

villages. Thus, overall increase due to BRAC intervention was 9.3 percentage points among the children of *always in deficit* households. The same for the *sometimes in deficit* households was 6.0 percentage points.

### Households' labour sale status and enrolment

NER significantly varied by labour sale status of households in both the years where labour selling households lagged behind the other households (Table 5.10). Increase in NER occurred equally in both types of households in the intervention villages. On the other hand, greater increase was observed in the labour selling households than others in the non-intervention villages. As a result, whereas due to BRAC intervention the enrolment rate increased 1.7 percentage points in the labour sale households it was 5.8 percentage points in the non-labour sale households.

**Table 5.10 Primary net enrolment rate of children by village type, labour sell status and year**

Labour sale status of HH	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Sell labour	73.5	79.6	6.1	p<0.001
Don't sell	81.4	87.4	6.0	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Non-intervention villages</i>				
Sell labour	73.1	77.5	4.4	p<0.001
Don't sell	83.2	83.4	0.2	ns
Level of significance	p<0.001	p<0.001		

### Availability of electricity at home and enrolment

Having electricity at home had positive relationship with primary NER. In both the intervention and non-intervention villages, the enrolment rate was significantly higher among the children who had electricity at home compared to those who did not have electricity at home (Table 5.11). Although, the rate significantly increased from 2011 to 2013 only in the intervention villages irrespective of availability of electricity at home, the change was higher for children with no electricity at home. Increase in NER due to BRAC intervention was counted 3.5 percentage points in those households where electricity was available and 5.2 percentage points where there was no electricity at home.

**Table 5.11 Primary NER of children by village type, availability of electricity at home and year**

Availability of electricity at home	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Available	82.3	85.9	3.6	p<0.001
Not available	74.2	79.2	5.0	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Non-intervention villages</i>				
Available	83.3	83.4	0.1	ns
Not available	76.2	76.0	-0.2	ns
Level of significance	p<0.001	p<0.001		

## Religion and enrolment

No difference in primary NER was observed between Muslim and non-Muslim children in 2011 or 2013 (Table 5.12). Significant increase in the rate from 2011 to 2013 was observed in both the groups in the BRAC intervention villages. This was not the case in the non-intervention villages. In the intervention villages, the NER increased 4.9 percentage points among the Muslims and 7.6 percentage points among the non-Muslims. These were respectively 1.2 and 3.3 percentage points in the non-intervention villages. Thus, overall gain due to BRAC intervention was 3.7 percentage points (4.9 – 1.2) for the Muslims and 4.3 percentage points (7.6 – 3.3) for the non-Muslims.

**Table 5.12 Primary net enrolment rate of children by village type, religion and year**

Religion	Year		Change	Level of significance
	2011	2013		
<i>Intervention villages</i>				
Muslim	77.9	82.8	4.9	p<0.001
Non-Muslim	76.4	84.0	7.6	p<0.001
Level of significance	ns	ns		
<i>Non-intervention villages</i>				
Muslim	78.4	79.6	1.2	ns
Non-Muslim	78.5	81.8	3.3	ns
Level of significance	ns	ns		

Village-wise analysis shows that of the 77 intervention villages the NER increased in 62 villages. In other words, increase was noticed in 80.5% of the intervention villages. This was 60% in the non-intervention villages. Overall, NER decreased in 19.5% of the intervention villages and increased 0.01–5% in 27.3% of the villages, 5.01–10% in 24.7% of the villages and more than 10% in 28.6% of the villages. Highest increase was noticed as 33.9 percentage points in a village and highest decrease was noticed as 13.2 percentage points in another village.

## 5.4 COMPARISON OF PRIMARY STUDENTS' BACKGROUND

At attempt was made to compare background information of BRAC school students of 2013 with that of other schools. Overall, 52.2% of primary students were girls which were 56.4% in BRAC schools and 50.5% in other schools (p<0.001) (Table 5.13). Girls share in BRAC schools was six percentage points higher than other schools. Although, no difference was observed between BRAC and other schools (9.6 years in each) in terms of mean age of students some differences were noticed in age distribution.

BRAC schools admitted 55.5% of its students from age group 8–10 years which was

**Table 5.13 Comparison of BRAC and other schools in gender and age distribution of primary students**

Age and gender	School type		Overall
	BRAC	Other	
% of girls	56.4	50.5	52.2
<b>Age</b>			
4–5y	0.6	0.8	0.6
6–7y	12.2	16.1	15.0
8–10y	55.5	49.3	51.0
11–12y	24.9	25.2	25.1
13–16y	6.9	8.6	8.1
All	100.0	100.0	100.0
Mean age (y)	9.7	9.6	9.6

49.3% in other schools. On the other hand, other schools were ahead of BRAC schools in admitting more students from 6–7 and 13–16 years age groups. However, an equal proportion of students of age 11–12 years were found in BRAC and other schools. The primary school model that was implemented in the study villages was specifically designed for children of age 8–10 years. Admission of majority of the students from the intended age-group was thus observed.

BRAC schools admitted more first generation learners than all other schools in the intervention villages (Table 5.14). Whereas, on an average, 39.8% of the primary students were first generation learners it was 45.3% in BRAC schools and 37.5% in other schools. None of the parents of these students had a single year of schooling. About 63% of the fathers and 61.3% of the mothers of BRAC school students never went to school. Proportions of students from the households with *deficit* food security status and selling manual labour were also higher in the case of BRAC schools. Whereas, 41.5% of the BRAC school students belonged to the *deficit* households and 64.9% in the labour selling households, these figures were 38.7 and 51% respectively in the case of other schools students. BRAC schools students also lagged behind compared to those in other schools in having electricity at home; 52.8% of BRAC and nearly 60% of other schools students had this facility at home. BRAC schools also admitted more students from the non-Muslim households compared to other primary schools. Whereas, 15.6% of the primary students in the intervention villages were non-Muslims, it was 18.2% in BRAC and 14.5% in other schools. Although 19.7% of the population in the BPS intervention villages were non-Muslims their participation in school was lower than this; however, BRAC's intake was more than others.

**Table 5.14 Comparison of BRAC and other schools by students' socioeconomic characteristics**

Socioeconomic characteristics	School type		Overall	Level of significance
	BRAC	Others		
Never schooled fathers	62.9	53.2	56.0	p<0.001
Never schooled mothers	61.3	52.8	55.3	p<0.001
First generation students	45.3	37.5	39.8	p<0.001
Deficit household	41.5	38.7	39.5	p<0.05
Labour sale household	64.9	51.0	55.1	p<0.001
Having electricity at home	52.8	59.9	57.8	p<0.001
Non-Muslim	18.2	14.5	15.6	p<0.001

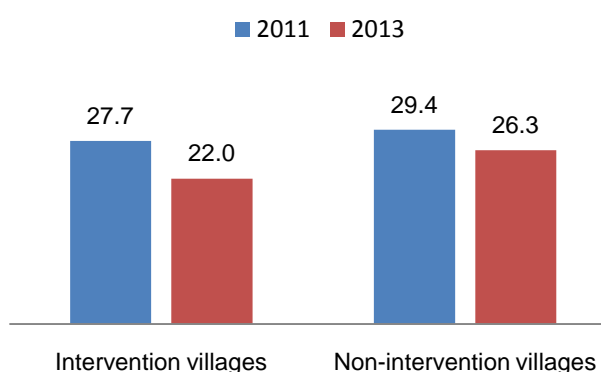
## 6 REDUCTION IN OUT-OF-SCHOOL CHILDREN

One of the aims of BRAC's educational interventions in the marginalized eight *upazilas* of Sylhet division was to reduce the density of out-of-school children in those *upazilas*. This chapter aims to see how much of such intention could be addressed with two years of intervention in terms of both proportion and absolute number. Similar to the baseline analysis (Nath 2013), situation of the out-of-school children of age 5–14 years were addressed in this chapter. Intervention villages of either BPPS or BPS including ESP were considered as intervention area and non-intervention area was similar to the earlier analysis of this report.

### 6.1 OVERALL AND GENDER-WISE ANALYSIS

In the baseline, a statistically significant variation was observed between the intervention and non-intervention villages in terms of proportion of out-of-school children. It was 1.7 percentage points lower in the intervention villages than the non-intervention villages (27.7% vs. 29.4%;  $p < 0.001$ ) (Figure 6.1 and Table 6.1). The rate significantly reduced in both the areas after two years of BRAC intervention; however, the gap increased to 4.3 percentage points. This means that more progress occurred in the intervention villages than in the non-intervention villages. The proportion reduced 5.7 percentage points in the intervention villages and 3.1 percentage points in the non-intervention villages. Thus, proportion of out-of-school children reduced 2.6 percentage points more in the BRAC intervention villages than the non-intervention villages.

**Figure 6.1 Percentage of out-of-school children by village type and year**



**Table 6.1 Percentage of out-of-school children by village type, gender and year**

Village type and gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	27.7 (39274)	22.0 (14746)	5.7	$p < 0.001$
Non-intervention	29.4 (10660)	26.3 (7170)	3.1	$p < 0.001$
Level of significance	$p < 0.001$	$p < 0.001$		
<i>Boys</i>				
Intervention	30.8 (19864)	25.8 (7428)	5.0	$p < 0.001$
Non-intervention	33.0 (5397)	30.6 (3685)	2.4	$p < 0.05$
Level of significance	$p < 0.01$	$p < 0.001$		
<i>Girls</i>				
Intervention	24.5 (19410)	18.2 (7318)	6.3	$p < 0.001$
Non-intervention	25.7 (5263)	21.8 (3485)	3.9	$p < 0.001$
Level of significance	ns	$p < 0.001$		

Proportionately more boys were out-of-school than girls in the baseline (Table 6.1). Although, a lower proportion of boys of the intervention villages were out-of-school in 2011 compared to those in the non-intervention villages, no difference was observed among the girls. Proportion of out-of-school boys as well as girls significantly reduced in both the intervention and non-intervention villages. However, the rate of reduction was more in the intervention villages than the non-intervention villages. It reduced 2.6 percentage points (5.0 – 2.4) more among the boys and 2.4 percentage points (6.3 – 3.9) more among the girls. Girls were less likely to be out-of-school not only in the baseline but after two years of BRAC intervention proportion of out-of-school girls reduced more compared to their boys counterparts in the intervention areas (6.3 vs. 5.0 percentage points). As a result, boys-girls gap in the intervention villages increased from 6.3 percentage points in 2011 to 7.6 percentage points in 2013. In 2013, in the intervention villages, 25.8% of the boys of age 5–14 years and 18.2% of the girls of the same age cohort were out-of school.

## 6.2 LOCATION-WISE OUT-OF-SCHOOLING

In the baseline in 2011, proportion of out-of-school children was significantly higher in the non-intervention villages than that of the intervention villages in *haor* areas and tea-estates/hilly areas but no difference was observed in the plain land (Table 6.2). After two years of BRAC intervention, this proportion significantly reduced in the intervention areas of all three locations and non-intervention areas of plain land and tea-estates/hilly areas. Although the rate of reduction was higher in the intervention areas than the non-intervention areas in plain land and *haor* areas, an opposite scenario was observed in the tea-estates/hilly areas. In the tea-estates/hilly areas, whereas, proportion of out-of-school children reduced by 5.8 percentage points in the BRAC intervention areas it reduced by 8.3 percentage points in the non-intervention areas. In the plain land, the proportion of out-of-school children reduced 3.4 percentage points more in the intervention areas than the non-intervention areas (6.7 – 3.3). This was 2.6 percentage points in the *haor* areas (3.8 – 1.2).

**Table 6.2 Percentage of out-of-school children by village type, location and year**

Village type and location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	27.9 (21964)	21.2 (8800)	6.7	p<0.001
Non-intervention	29.1 (6386)	25.8 (3347)	3.3	p<0.01
Level of significance	ns	p<0.001		
<i>Haor area</i>				
Intervention	27.7 (12833)	23.9 (4577)	3.8	p<0.001
Non-intervention	29.9 (3264)	28.7 (2745)	1.2	ns
Level of significance	p<0.05	p<0.001		
<i>Tea-estates/hilly areas</i>				
Intervention	26.8 (4477)	21.0 (1369)	5.8	p<0.001
Non-intervention	30.0 (1010)	21.7 (1078)	8.3	p<0.001
Level of significance	p<0.05	ns		

## 6.3 AGE AND OUT-OF-SCHOOLING

Age-wise change in out-of-school children is provided in Table 6.3. The children were divided into four age groups, viz., 5 years, 6–7 years, 8–10 years, and 11–14 years. In 2011, equal proportion of out-of-school children was found between the intervention and non-intervention villages in the first three age groups but in the fourth age group it was significantly higher in the non-intervention villages than the intervention villages.

**Table 6.3 Percentage of out-of-school children by village type, age group and year**

Village type and age group	Year		Change	Level of significance
	2011	2013		
<i>5 years</i>				
Intervention	81.5 (4456)	71.9 (1553)	9.6	p<0.001
Non-intervention	83.6 (1192)	80.2 (737)	3.4	ns
Level of significance	ns	p<0.001		
<i>6-7 years</i>				
Intervention	37.1 (8501)	30.4 (2932)	6.7	p<0.001
Non-intervention	36.6 (2330)	35.9 (1485)	0.7	ns
Level of significance	ns	p<0.001		
<i>8-10 years</i>				
Intervention	11.5 (13640)	7.0 (4723)	4.5	p<0.001
Non-intervention	12.2 (3748)	9.8 (2320)	2.4	p<0.01
Level of significance	ns	p<0.001		
<i>11-14 years</i>				
Intervention	19.9 (12677)	16.5 (5538)	3.4	p<0.001
Non-intervention	24.5 (3390)	21.4 (2628)	3.1	p<0.001
Level of significance	p<0.001	p<0.001		

Two years later, proportion of out-of-school children reduced in all four age cohorts in both the intervention and non-intervention villages. This reduction was not statistically significant for the children of the first two age groups in the non-intervention villages. In the intervention villages, proportion of out-of-school children reduced 9.6 percentage points among the children of age 5 years which gradually decreased to 6.7 percentage points for age 6–7 years, 4.5 percentage points for age 8–10 years and 3.4 percentage points for age 11–14 years. However, no such trend was observed in the non-intervention villages.

Comparing the changes in proportion of out-of-school children in the intervention and non-intervention areas, net reduction in out-of-school children in the intervention villages was calculated. The net reduction in out-of-school children was 6.2 percentage points (9.6 – 3.4) among those aged 5 years, six percentage points (6.7 – 0.7) for those aged 6–7 years, 2.1 percentage points (4.5 – 2.4) for those aged 8–10 years and 0.3 percentage points (3.4 – 3.1) for those aged 11–14 years.

#### **6.4 OUT-OF-SCHOOL CHILDREN IN ABSOLUTE NUMBER**

An attempt was made to find out the reduction of out-of-school children in absolute number throughout the *upazilas*. It was done through extrapolating the findings of the sampled intervention and non-intervention villages for all the 1820 villages under eight *upazilas*. Growth rate of population aged 5–14 years derived from the baseline and 2013 sample survey was used in finding out the total population in 2013. The population increased 3.7% during 2011–2013 (3.7% in the intervention and 3.8% in the non-intervention villages).

It was found in the intervention villages that the total number of out-of-school children was 80,430 in 2011 which reduced to 76,158 in 2013 (Table 6.4). On the other hand, in the non-intervention villages, total number of out-of-school children was 44,868 in 2011 which increased to 49,122 in 2013. This means that during 2011–2013, the total number of out-of-school children was reduced by 4,272 in the intervention villages and 4,254 additional children joined the total number of out-of-school children in the non-

intervention villages. Overall, in the eight *upazilas*, out-of-school children reduced from 125,298 in 2011 to 125,280 in 2013. The difference is only 18. In other words, percentage of out-of-school children in the eight marginalized *upazilas* of Sylhet division reduced from 25.3% in 2011 to 23.5% in 2013.

**Table 6.4 Absolute number of out-of-school children by village type and year in eight *upazilas***

Village type	2011		2013		Change
	Total children	Out of school	Total children	Out of school	
Intervention	321,639	80,430	345,440	76,158	-4272
Non-intervention	173,557	44,868	186,747	49,122	+4254
All	495,196	125,298	532,187	125,280	-18

## 7 DISCUSSIONS AND RECOMMENDATIONS

This final chapter discusses the findings of this study as presented in the preceding chapters. Relevant findings from other studies and previous reports were used for comparison purpose. Finally, key constraints of enrolment status of the marginalized *upazilas* of Sylhet division were identified and some policy recommendations were placed for further implementation.

### 7.1 DISCUSSION

Geographical targeting of basic social services of the most deprived areas of Bangladesh has been argued as one of the ways of ensuring progress towards attaining MDGs with equity (UNICEF 2010). Furthermore, findings from the previous *Education Watch* reports (Nath and Chowdhury 2009 and Nath *et al.* 2011) clearly captured the attention of the stakeholders to provide special consideration for Sylhet division as many parts of this region are lagging behind in different development indicators due to a harsh geographical positioning. In the recent past, BRAC Education Programme (BEP) has moved from other parts of the country where it had been intervening for long to disadvantaged areas of the country. Sylhet division is one of them. A census was conducted in eight marginalized *upazilas* of Sylhet division in 2011 (Nath 2013). Based on the census findings, BEP introduced extensive intervention with its pre-primary and primary schools from 2012. Some of the interventions were provided through some local NGOs under the Education Support Programme (ESP). It was expected that this would subsequently affect the primary completion rate and increase the number of literate persons in the *upazilas*. After two years of intervention (during 2012 and 2013) this study explored changes in school enrolment in the intervention villages compared to those had no intervention. It also explored whether there was any change in the rate of out-of-school children.

BRAC did not establish schools in all villages of the eight targeted *upazilas*. Out of 1,820 villages, any kind of BRAC schools was established in 866. This study identified the characteristics of the villages where BRAC established schools during the first two years of its new operation in Sylhet division. Findings showed that in general, BRAC had a tendency to establish schools in those villages which were large in size in terms of number of households. BRAC had an indication to establish schools in the villages having proportionately more plain areas (than *haor* or tea-estate/hilly areas) and a lower proportion of ethnic minority households (than Bangali). Having at least one formal school in the village also got priority in establishing new schools. All these were some favourable conditions in the expansion of the programme.

Difference was observed in choosing villages for the interventions of pre-primary and primary education. Comparatively better-off villages were considered for establishing pre-primary schools than that of primary schools. One genuine reason for this lies with an agreement between the government and BRAC. Under this agreement, students who received pre-primary education in BRAC schools were not supposed to enrol in BRAC primary schools. Thus, BRAC had to ensure a nearby formal primary school while establishing its non-formal pre-primary school. Formal primary schools were basically located in the better-off villages. Thus, a structural

problem was seen in this case. It is an obvious assumption that students would continue primary education after completing pre-primary education. Thus, BRAC cannot establish pre-primary schools if there is no formal primary school nearby. More importantly, continuation of education in primary school is a must in order to make pre-primary education meaningful. On the other hand, no such problem arose in establishing primary schools.

Operating school programme in the marginalized *upazilas* is very much appreciable which BRAC has rightly chosen. However, the findings clearly showed that BRAC could not include those villages which were relatively more vulnerable among the villages in the marginalized *upazilas*. What happened during the first two years of Sylhet operation could not fully meet BRAC's intention of bringing the most marginalized into the school network. In other words, BRAC addressed the marginalized *upazilas* but not the most marginalized villages within them. The *Education Watch* study observed that operating school programme in Sylhet division is relatively challenging (Nath *et al.* 2011) and it is more challenging in the marginalized *upazilas*. BRAC took the challenge and could overcome it to some extent but not fully. Challenges of working in the most marginalized areas need to be studied in depth in order to find out some concrete solutions.

It is not unlikely that BEP has started working in relatively easier conditions to get habituated with the hard reality of marginalized villages and would gradually move to difficult locations over time. This can be a convincing argument. If this is the case, BEP should then subsequently move to more *haor*-intensive villages and villages with more out-of-school children, illiterate population, deficit households and smaller in size with its primary education programme. An immediate difficulty would be a scarcity of qualified persons to prepare them as teachers. Bringing qualified persons from other communities would not be an easy task due to motivational and financial reasons. Working in these difficult locations has financial implications too. Discussing with the BRAC accounts department and BEP personnel it was known that cost per child per year is already higher in Sylhet division compared to other parts of Bangladesh. It would further increase if the programme moves to the most marginalized villages. Increased investment will be a reality.

This study clearly demonstrated increase of school enrolment among the children of pre-primary and primary age groups in the *upazilas*. Such an increase was much higher in the BRAC intervention villages than that in the non-intervention villages. Net contribution of BRAC was clearly shown in both pre-primary and primary school enrolment. BRAC's contribution was more in the case of increasing pre-primary enrolment compared to primary enrolment. BRAC pre-primary schools were at the top in terms of catering to about two-thirds of the pre-primary students in the intervention villages. Otherwise, 29% of the primary students enrolled in BRAC schools. Both the figures were much higher than those figures at the national level. BRAC's contribution in enabling access to education in the marginalized *upazilas* of Sylhet division was much prominent than that in other parts of Bangladesh.

BRAC established 226 more primary schools than pre-primary schools in the intervention villages of Sylhet division. The reason behind higher contribution of BRAC in pre-primary enrolment lies with much lower pre-primary NER in the base year. Whatever the case, after two years of BRAC intervention, both the NERs for pre-primary and primary were still much lower in the intervention areas than those at the national level (Nath *et al.* 2014). Compared to 52.4% pre-primary NER at national level the BRAC intervention villages had 31.4%; a gap of 20 percentage points. This gap for

primary NER was 11.5 percentage points (94.5% at the national level vs. 83% in the intervention villages). This tells about inadequate intervention during the past two years. Surprisingly, the government or any other agencies did not have any additional intervention there during the study period. BRAC can try alone with additional investment in the coming years but probably it is not practicable for a single organization like BRAC to take these marginalized *upazilas* at the national level. Engagement of other institutions especially the government is very much crucial. Joint effort of the government and BRAC is another and most probably the most practical alternative. BRAC's model and its workforce along with government's financial support might work better and ensure faster progress.

BRAC's pre-primary intervention not only increased pre-primary aged children's enrolment in pre-primary education, a section of them also enrolled in the first grade of primary education. Furthermore, children of other ages enrolled in BRAC pre-primary schools. BRAC needs to be careful about the age of children while admitting them in schools. Although a section of parents prefer late entry of children in school, schools can play a role in enrolment at the right age. As BRAC pre-primary schools are established nearby the communities compared to the formal primary schools, parents in such a case might prefer six-year old children to admit in pre-primary education.

Who benefitted most from BRAC intervention may be a question of curiosity at this point of discussion. Analyses presented in the previous chapters clearly showed no difference between pre-primary students of BRAC and other schools in terms of various socioeconomic backgrounds. On the other hand, children of relatively poorer households with no or less education of parents enrolled in the primary schools of BRAC. It would have been better if BRAC could favour the children of poorer households and those of the never schooled parents in admission in pre-primary schools. There is a scarcity of provision for pre-primary education in the communities. It is not unlikely that relatively better-off households try to avail this which in many cases unavoidable to accept. Again, BRAC pre-primary initiative is to prepare children for formal primary education and primary education initiative is considered as the last chance for getting education. In both the cases, proportions of girls were higher in BRAC schools than the other schools in the villages.

We also examined whether BRAC intervention could contribute in reducing out-of-school children in the areas. Whereas, the rate of out-of-school children reduced 5.7 percentage points in the BRAC intervention villages it reduced 3.1 percentage points in the non-intervention villages. Here too we see BRAC's contribution in reducing a portion of out-of-school children. As expected, it was more in the plain land than in the *haor* areas. BRAC's contribution was noticed more among the younger children of age 10 years or below. One interesting feature in this was that BRAC's net contribution in reducing out-of-school children decreased with the increase of age. Extrapolating the proportions of out-of-school children found in this study to all the children of eight *upazilas*, we observed mostly an equal number of children decreased and increased in the intervention and non-intervention villages respectively. This implies that BRAC programme helped reducing out-of-school children in the intervention villages but overall, no change was observed. This again points out the need for intervention in all the villages of the *upazilas*.

## **7.2 CONCLUSION**

In conclusion, BRAC is quite successful in increasing enrolment of children in both pre-primary and primary schools through its direct and indirect (ESP) intervention in

about half of the villages of eight marginalized *upazilas* of Sylhet division. As a result, out-of-school children also reduced in these villages both in absolute number and in proportion. Primary educational intervention was absolutely poverty focused which was not the case for pre-primary intervention. Operating school programme in the marginalized *upazilas* is challenging and quite expensive. Most marginalized villages are still waiting to be intervened. This would further increase programme cost. Very little increase in enrolment in the non-intervention villages was noticed which had no influence in reducing out-of-school children; rather it increased in absolute number due to the increase of population.

### **7.3 RECOMMENDATIONS**

Based on the findings presented in earlier chapters and the discussions and conclusions made above, the following recommendations were made in order to achieving EFA and MDG targets in the study *upazilas*.

- In line with the success of BRAC in terms of increasing net enrolment and reducing out-of-school children, the programme should now move to the most disadvantaged villages of the *upazilas*. Without intervening in all the villages of the *upazilas* together overall reduction of out-of-school children will not be possible. Two years experience of BRAC should be considered as an asset in the process of expansion.
- It may be difficult for BRAC alone to take all the villages of the eight marginalized *upazilas* at the national level in terms of educational indicators. BRAC model has some advantages over the formal education system especially working in the small villages. Expansion of ESP activities is an option. An evaluation of the present work of ESP can give us a sense of its possible expansion. If a positive result is found half of the tasks can be delivered through ESP.
- The government should come forward with financial assistance to BRAC if development partners are unable to do so adequately. PEDP 3 should pay special attention to the marginalized villages. Setting of formal school system would not be viable; thus, non-formal model should be the choice to tackle the situation. The government, development partners and BRAC should work together and find out a practicable solution.
- The research division of BRAC should document the challenges of working in these marginalized *upazilas* and show how some of these were overcome by BRAC programme. A study on this may suggest some ways of confronting the challenges. Another study on quality of education in such a situation would not only help in fulfilling knowledge gap but also help in designing a better system.

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## ANNEXES

### Annex 4.1 Net enrolment rate among children 5 years by village type, gender and year

Village type & gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	16.9 (2348)	36.9 (738)	20.0	p<0.001
Non-intervention	16.4 (1192)	19.8 (737)	3.4	ns
Level of significance	ns	p<0.001		
<i>Boys</i>				
Intervention	16.7 (1231)	32.6 (368)	15.9	p<0.001
Non-intervention	14.4 (640)	17.6 (387)	3.2	ns
Level of significance	ns	p<0.001		
<i>Girls</i>				
Intervention	17.2 (1117)	41.1 (370)	23.9	p<0.001
Non-intervention	18.8 (552)	22.3 (350)	3.5	ns
Level of significance	ns	p<0.001		

### Annex 4.2 Net enrolment rate among children 4–5 years by village type, gender and year

Village type & gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	5.6 (3,945)	20.4 (1,353)	14.8	p<0.001
Non-intervention	3.4 (2,205)	8.4 (1,449)	5.0	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Boys</i>				
Intervention	5.0 (2,019)	17.5 (693)	12.5	p<0.001
Non-intervention	3.1 (1,164)	7.3 (758)	4.2	p<0.001
Level of significance	p<0.01	p<0.001		
<i>Girls</i>				
Intervention	6.1 (230)	23.5 (660)	17.4	p<0.001
Non-intervention	3.7 (1,041)	9.7 (691)	6.0	p<0.001
Level of significance	p<0.01	p<0.001		

### Annex 4.3 Net enrolment rate among children 5 years by village type, gender and year

Village type & gender	Year		Change	Level of significance
	2011	2013		
<i>All</i>				
Intervention	8.0 (2,348)	31.4 (738)	23.4	p<0.001
Non-intervention	4.9 (1,192)	13.3 (737)	8.4	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Boys</i>				
Intervention	7.1 (1,231)	28.0 (368)	20.9	p<0.001
Non-intervention	3.9 (640)	11.4 (387)	7.5	p<0.001
Level of significance	p<0.01	p<0.001		
<i>Girls</i>				
Intervention	9.0 (1,117)	34.9 (370)	25.9	p<0.001
Non-intervention	6.2 (552)	15.4 (350)	9.2	p<0.001
Level of significance	p<0.05	p<0.001		

#### Annex 4.4 Net enrolment rate among children 5 years by village type, location and year

Village type & location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	15.0 (1430)	34.3 (472)	19.3	p<0.001
Non-intervention	17.1 (707)	20.5 (336)	3.4	ns
Level of significance	ns	p<0.001		
<i>Haor area</i>				
Intervention	20.1 (826)	42.0 (231)	21.9	p<0.001
Non-intervention	15.3 (378)	16.7 (294)	1.4	ns
Level of significance	p<0.05	p<0.001		
<i>Tea-estates/hilly</i>				
Intervention	18.5 (92)	37.1 (35)	18.6	p<0.05
Non-intervention	15.9 (107)	26.2 (107)	10.3	ns
Level of significance	ns	ns		

#### Annex 4.5 Net enrolment rate among children 4–5 years by village type, location and year

Village type & location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	5.9 (2358)	19.7 (868)	13.8	p<0.001
Non-intervention	2.8 (1271)	9.7 (631)	6.9	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Haor area</i>				
Intervention	4.7 (1411)	22.0 (422)	17.3	p<0.001
Non-intervention	3.0 (726)	6.9 (611)	3.9	p<0.001
Level of significance	ns	p<0.001		
<i>Tea-estates/hilly</i>				
Intervention	8.0 (176)	19.0 (63)	11.0	p<0.02
Non-intervention	8.7 (208)	9.2 (207)	0.5	ns
Level of significance	ns	p<0.05		

#### Annex 4.6 Net enrolment rate among children 5 years by village type, location and year

Village type & location	Year		Change	Level of significance
	2011	2013		
<i>Plain land</i>				
Intervention	8.4 (1,430)	29.7 (472)	21.3	p<0.001
Non-intervention	3.7 (707)	14.0 (336)	10.3	p<0.001
Level of significance	p<0.001	p<0.001		
<i>Haor area</i>				
Intervention	6.9 (826)	35.5 (231)	28.6	p<0.001
Non-intervention	5.3 (378)	11.6 (294)	6.3	p<0.01
Level of significance	ns	p<0.001		
<i>Tea-estates/hilly</i>				
Intervention	13.0 (92)	28.6 (35)	15.6	p<0.05
Non-intervention	12.1 (107)	15.9 (107)	3.8	ns
Level of significance	ns	ns		

**Annex 4.7 Gross enrolment ratio at pre-primary level 5 years by village type, gender and year**

Village type & gender	Year		Change
	2011	2013	
<i>All</i>			
Intervention	35.5	104.7	69.2
Non-intervention	27.7	58.3	30.6
<i>Boys</i>			
Intervention	33.1	101.9	68.8
Non-intervention	24.4	54.0	29.6
<i>Girls</i>			
Intervention	38.0	107.6	69.6
Non-intervention	31.5	63.1	31.6

**Annex 4.8 Gross enrolment ratio at pre-primary level 5 years by location, village type and year**

Village type & gender	Year		Change
	2011	2013	
<i>Plain land</i>			
Intervention	39.4	104.0	64.6
Non-intervention	19.5	73.2	53.7
<i>Haor area</i>			
Intervention	22.0	106.1	84.1
Non-intervention	27.2	44.9	17.7
<i>Tea-estate/hilly area</i>			
Intervention	94.6	105.7	11.1
Non-intervention	83.2	48.6	-34.6