

# Watch Report

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## Health knowledge of rural Bangladeshi children: Does BRAC's non-formal schools make any impact?

**Abstract:** This report explores the impact of BRAC's non-formal primary education programme (NFPE) on raising health knowledge of the rural Bangladeshi children. Three groups of children viz. NFPE graduates, formal school learners and children who never went to school were assessed with an instrument containing six health knowledge items. A sample of 720 children, equally distributed by study groups and sex, were selected randomly. Data were collected from five areas where a surveillance system was in operation. This study reveals that NFPE graduates are more likely to have higher level of health knowledge than the children of other two groups. The impact of NFPE is due to its extra emphasis to enhance positive influence of education on lives of the rural population.

### Introduction

Impact of Development programme to increase health knowledge of adults is well known. It was observed that mothers' health knowledge helped them get better health care for their children (Streatfield et al., 1990). The World Conference on Education for All (WCEFA) also emphasised provision of necessary life skills in basic education (WCEFA, 1990). Health knowledge is obviously an important part of it (Chowdhury et al., 1994).

Like most other developing countries the health care system in Bangladesh is poor. Necessary health knowledge can help people get better health care. Although there is no special programme in Bangladesh to improve children's health knowledge, the

non-formal primary education (NFPE) programme of BRAC aims to provide knowledge on public hygiene and health to its learners (BRAC, 1994). On the other hand, the pupils of formal schools also get such knowledge through the existing curriculum. Again, people can learn necessary health knowledge from the society they live in, even if they do not enrol in school. This report examines the impact of BRAC's education programme on raising health knowledge of the rural Bangladeshi children.

### Methodology

This report is based on the secondary data obtained for another study on basic education by Nath (1997). The assessment instrument of the said study contains six

questions on health knowledge. These are:

- a) What is a good and simple treatment for diarrhoea?
- b) Where should one defecate?
- c) Which foods help to prevent night blindness?
- d) How can water be purified, or drinkable?
- e) How does a child benefit from vaccination?
- f) What should you do first for someone with a very high temperature?

Answers to these six questions are analysed in this report. The response of each question was assessed whether it is correct or incorrect. The background information was collected by interviewing the parents or the guardians of the children.

Data were collected from five of the 10 areas under the surveillance system of the *Watch project*. Three groups of children were assessed for the study. These are: graduates of BRAC schools completing three years of NFPE, formal school learners with at least three years of schooling, and never-enrolled children. It should be mentioned that BRAC learners were graduated during 1995 and 1996 and the age of all the study children were from 10 to 16 years. A sample of 720 children, equally distributed by study groups and sex, were randomly selected (Nath, 1997).

### Findings

The level of health knowledge of the interviewed children varied by items (Table 1). More than 90% of the BRAC school graduates knew the correct answers of four items. These are: treatment of diarrhoea, place of defecation, prevention of

night blindness, and water purification. Whereas, the formal school learners showed such performance only in two items: treatment of diarrhoea and place of defecation. On the other hand, none of the never enrolled children showed such performance in any of the items. Around 60% of them knew about the treatment of diarrhoea and the place of defecation. These children did very poor in other four items. The performance of BRAC graduates were significantly higher in four items than formal school learners ( $p < 0.001$ ). These are: treatment of diarrhoea, benefits from vaccination, prevention of night blindness, and water purification. Never enrolled children did significantly worst in all the items compared to other two groups ( $p < 0.001$ ).

**Table 1. Percentage of children correctly answered different health knowledge items by school category**

Items	Study group		
	BRAC	Formal	Never
Diarrhoea	99.6	93.8	57.1
Defecation	93.3	90.4	62.9
Vaccination	88.8	60.0	9.2
Night blindness	91.3	67.9	21.3
Water purification	96.3	74.0	27.1
High fever	64.2	64.6	28.3

Note: Difference between formal and BRAC school is not significant at  $p < 0.05$  for defecation and high fever. All other differences are statistically significant at  $p < 0.001$ .

The mean and standard deviation of number of correct items are presented in Table 2. On average, BRAC graduates correctly answered 5.3 items. This estimate was 4.5 for formal

school learners and only 2.1 for never enrolled children. Table 2 also shows that BRAC school graduates did significantly better than formal and never enrolled children ( $p < 0.001$ ). Again the formal school learners did better than never schooled children ( $p < 0.001$ ). No gender difference was observed in the data.

**Table 2. Mean and (standard deviation) of the number of correct answers by school category and sex**

Study group	Sex		
	Boy	Girl	Both
BRAC	5.3 (1.0)	5.4 (1.0)	5.3 (1.0)
Formal	4.4 (1.6)	4.5 (1.6)	4.5 (1.6)
Never	1.9 (1.6)	2.2 (1.7)	2.1 (1.7)

Note: Differences between any two types of schools are statistically significant at  $p < 0.001$  for all three cases.

**Table 3. Percentage of children by number of items correctly answered and school category**

Number of items	Study group		
	BRAC	Formal	Never
0	-	1.7	21.3
1	0.8	4.2	20.0
2	0.8	7.5	23.3
3	5.0	12.1	15.8
4	9.2	15.0	9.2
5	25.8	21.7	7.1
6	58.3	37.9	3.3

Nearly 38% of the formal school children and 58.3% of the BRAC school graduates correctly answered all the six items. Surprisingly, 3.3% of the never enrolled children knew correct

answers of all the items. However, sadly, after completing at least three years curricula in the formal schools 1.7% of the children failed to answer any question item (Table 3). More than one fifth of the never enrolled children also failed to answer at least one question item.

To understand the impact of BRAC schools on raising health knowledge of the children logistic regression analysis was performed. A total of seven regression models were estimated; six for different health knowledge and one for all items together. Table 4 presents odds ratios of the

**Table 4. Odds ratios of the logistic regression coefficients<sup>1</sup> of school category predicting different health knowledge**

Health knowledge	School type	
	Formal	BRAC
Diarrhoea *	1.00	12.5
Defecation	1.00	1.1
Vaccination*	1.00	6.0
Night blindness*	1.00	5.5
Water purification*	1.00	9.7
High fever	1.00	1.2
All items*	1.00	2.9

<sup>1</sup> The estimates were calculated by controlling for sex, age, current enrolment status, mothers' education, fathers' education, yearly food security status, religion and access to electronic communication media.

\*  $p < 0.05$     †  $p < 0.001$

regression coefficients of school category controlling for age, sex, current school enrolment, parental education, yearly food security status, religion and access to electronic communication media. The findings of regression analyses show that BRAC's NFPE has a significant contribution on raising knowledge on diarrhoea, vaccination, night blindness and water purification. It was also observed that the children of both the schools equally knew the correct answers about first aid for high fever and place of defecation. The chance to know the correct answers of all the given health items is 2.9 times higher if the children get education in BRAC schools rather than formal schools (Table 4).

### **Discussion and conclusion**

The findings of this study clearly show that if the rural children get education from BRAC's NFPE they possess a higher level of health knowledge than those of formal schools. The explanation of this situation would be found in the overall operational process of NFPE and its aims. One of the aims of NFPE is to enhance the positive influence of education in population planning, public hygiene and health. The teachers of NFPE are given lessons on necessary health care and practice when they take pre-service or in-

service training. Parents of the BRAC school learners also discuss these issues when they meet in each month. All these factors might have influenced the NFPE graduates to have better knowledge compared to their peers in formal schools. Government's attempt to give a publicity of different aspects of general health care through TV and radio might helped the children get health knowledge. These were very much relevant especially for the never enrolled children. However, none of these are proved effective like the non-formal primary education programme of BRAC.

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