

**Impact of BRAC's non formal education programme in
raising life skills knowledge among females
of rural Bangladesh**

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Abstract

The objective of this study is to assess the role BRAC's education programme on life skills knowledge among its graduates. Data were collected from *Watch*, in three rural unions of Manikganj district where BRAC has been operating its non-formal primary education programme since 1980s. All BRAC school graduates, who were women, married and living in the study villages were included in the sample. The two other group of married women were also selected at random from the same villages i) who graduated from formal schools and ii) who never went to any school. The total sample size was 891 married women.

Findings reveal that life skills knowledge were much higher among BRAC graduates than formal school graduates. However, no significant difference was observed in regarding knowledge of legal issues between the women of formal schools and BRAC graduates. The study concludes that BRAC's education programme had significant role in raising life skills knowledge of the rural women.

Introduction

Non formal education is that form of education which consists of mostly assortment of organised and semi-organised educational activities operating outside the regular structure and routines of formal system. The aim of such form of education is to meet a great variety of learning needs of different sub-groups of population, both young and old (GOB, 1995). To achieve the goals of universal primary education (UPE) and the goal set in the Jomtien conference, the government as well as the non-government organisations (NGO's) in Bangladesh are operating non formal schools in different areas of the country. The programme that operated by BRAC by far the largest non-formal education programme in Bangladesh (Ahmed et al, 1993).

Overall performance of education sector in Bangladesh is not so satisfactory. According to 1991 census, the literacy rate among population aged 7 and above is only 32.4% and adult (15+ years) literacy rate is only 35.3% (Bangladesh Bureau of Statistics, 1994a). As calculated by Ahmed (1993) the net enrollment rate in primary level is only 60%. Gender variation in enrollment, literacy and basic competencies exists in Bangladesh. Females lag behind males in all types of educational opportunities and achievements of this nation (Bangladesh Bureau of Statistics, 1994b; UNICEF, 1993).

BRAC has initiated its non-formal education programme in mid 1980's to provide education to the large proportion of children who never enrolled in any formal schools or dropped out from government or non-government educational efforts. Most of these schools are located in rural Bangladesh. The learners of these schools come from the poorer section of the society. Each school contains only 30 students and 70% of them are girls. Two types of schools are being operated by BRAC: one for 8-10 years old and the other for 11-16 years of old children. These schools are not intended to operate as permanent institutions but rather to address a single cohort of students who enroll during the same school year and move together through the three years of schooling. Once that cohort completes the three year cycle, the school ceases to exist unless there are at least 30 eligible children in the community (Ahmed et al., 1993). Up to March 1995, nearly 330 thousands of children were graduated from BRAC schools.

Life skills not only functional for once personal life but also for his/her future life as individual, family member and citizen. Recently life skills became an essential component of measuring the level of educational achievement or progress of literacy situation in a society. The definitions - basic education, basic learning needs, learning achievement-- proposed by the Inter Agency Commission of the World Conference on Education for All (WCEFA) shows life skills knowledge as a part of whole process (WCEFA, 1990). It is expected that if life skills knowledge is achieved by one, s/he will be more capable in solving everyday problems. His/her contribution towards well-being of own family, society and the nation is also expected to be more.

The objective of this study is to examine the hypothesis that as the curriculum of BRAC's education programme is mostly life oriented, and the contribution of these schools are expected to be more in achieving life skills knowledge of the population of a community.

Methodology

Study area and the sample

The Research and Evaluation Division of BRAC had a intensive monitoring system in 87 villages of Manikganj district of Bangladesh. The area is 70 Kms away of Dhaka, the capital of the country. BRAC's education programme has started from Manikganj and still it is continuing there. The routing work of the monitoring system was to update population information once a month. Data were preserved in computer.

To know the impact of BRAC's non formal education programme on the lives of its former students a study was conducted in November-December 1995. As the study was mostly concentrated on family planning behaviour only the married females were considered in the study. Total 297 former students of BRAC schools were found in the study area who satisfied above criteria. These females were graduated from BRAC schools during last 10 years. Controlling age and village, two other groups of females with same size were randomly selected-- one from the non-educated persons and the other from those with at least three years of formal education. Taking 297 in each group total sample size of the study was 891. Data were collected by the trained female field interviewers.

Operational definition of study variables

There is no ideal definition of life skills knowledge. The concept of skills varies culture to culture and even time to time. It was really a difficult task to develop a valid and reliable measure of life skills knowledge. In Bangladesh, for the first time in 1992, a section of items on life skills knowledge was set to assess basic competency of the children (Chowdhury et al., 1994). Along with above, knowledge which should be known to a rural married women of Bangladesh and some issues related to the problems that the country faces were considered in selecting the life skills knowledge for the study.

Five separate dimensions were constructed as scale variables to measure life skills knowledge. Arbitrary judgements were applied in weighting the scores. All the operational measures of knowledge used in this study reduced the data to dichotomous variable. The cut-off points of knowledge vs. non-knowledge were based on percentage distribution for each dimension. The cut-off point for life skills knowledge was tried to made at around 50th percentile for most dimensions. The operational measures of the study variables are described below.

Knowledge about Immunisation: One point was given if the respondent could correctly answer 'what benefit comes from vaccination of child'. One point was successively added if she could answer each of the six immunisable diseases. Another one point was added if she knew the place where vaccination is available. A respondent with a score of six or more was considered to have life skill knowledge.

Knowledge on health and hygiene: Three questions were asked to the respondents: what is a good and easy treatment of diarrhoea, what food helps to prevent night blindness, and how can water be made drinkable. One point was given to each of the correct answer. A respondent with a score of three was considered to have life skill knowledge.

Knowledge on legal issues: Three questions were asked to the respondents: whether dowry is a crime, what is the share of daughter and son in fathers property, and what is the procedure to divorce a wife. One point was given to each of the correct answer. A respondent with a score of two and more was considered to have life skill knowledge.

Knowledge on outside world: The respondent was asked whether she knew the names of the following: leader of Bangladesh's liberation movement, prime minister of Bangladesh, and chairman of the local government body. One point was given for each of the correct names. Another one point was added whether she knew the year of independent of Bangladesh. A respondent with a score of three or more was considered to have life skill knowledge.

Knowledge on poultry vaccination: Only one question was asked to test the knowledge on prevention of poultry and livestock from falling ill. If the respondent could correctly answer the question she was given one point and was considered to have life skill knowledge.

Composite life skills score: A woman was considered to have life skills knowledge if she had a positive score (as coded as one) on three or more of the five skills described above.

Explanatory variables: Total nine variables were considered as explanatory variables of this study. The variables were age of respondent, education of father, mother and husband, access to media, access to credit programme, housing condition, number of assets in household, and study group. The measurement of these variables are presented in Table 1.

Table 1: Measurement of explanatory variables

Explanatory variables	Measurement
Age	Age of respondent in year (15-19= 1, 20-15= 2)
Father's education	Whether father has at least one year of schooling (No= 1, Yes= 2)
Mother's education	Whether mother has at least one year of schooling (No= 1, Yes= 2)
Husband's education	Whether husband has at least one year of schooling (No= 1, Yes= 2)
Media	Access to radio or television (No= 1, Yes= 2)
Credit	Access to credit programmes (No= 1, Yes= 2)
House	Housing condition of household (Bad= 1, Good= 2)
Asset	Number of assets in household (None=1, 1-2= 2, 3-4= 3)
Study group	Classification of the respondents according to school type (Non-schooling= 1, Formal school= 2, BRAC school= 3)

Analytical procedure

Analysis of the data were started with bivariate approach. Appropriate statistical tests were done to know the significance of difference in knowledge among three groups of respondents. Logistic regression models were employed to explore the relative impact of BRAC's education programme on different dimensions of life skills knowledge. Odds ratios of each of the regression coefficients were calculated to make sure of better understanding of relative impact of BRAC's education programme. Finally, the probabilities that women with particular characteristics will have life skills knowledge were also calculated for different dimensions of life skills knowledge.

Results

Socio-economic characteristics of the respondents

The socio-economic characteristics of the respondents are presented in Table 2. Mean age of three groups of respondents were very similar to each other. Mean years of schooling completed by the BRAC graduates was 4.2 years and it was 5.6 years for formal school graduates. Around 24% of the BRAC school graduates and non-schoolers were participating in credit programmes of NGO's, whereas it was 17.5% for formal school graduates. Mothers of the respondents were less educated than their fathers and husbands. Mothers, fathers and husbands of the non-schooling respondents were less educated than those of other two groups of respondents. Proportionately more educated mother, father and husband were found among the respondents of formal school graduates. Over 32% of the BRAC school graduates had access to electronic media. On the other hand, it was 38% and 24.2% respectively among the formal school graduates and non-schoolers. On average, more number of assets were found in those households of formal school graduates. Housing condition of these households were found better than others. According to land ownership and labour selling status of the households non-schooling respondents were found poorer followed by BRAC school graduates and formal school graduates.

Levels of life skills knowledge

Bivariate analysis were done to know the existing level of life skills knowledge of the three groups of respondents. Table 3 displays this level for five dimensions of life skills knowledge. More than three fourth of the BRAC graduates had knowledge on immunisation, whereas it was 56.9% among the formal school graduates and 15.2% among the non-schoolers. Level of knowledge on immunisation was statistically significant between all possible composition of two groups of respondents ($p < 0.0001$). Knowledge on health and hygiene was also found significantly differs among the three groups of respondents. Level of knowledge on this dimension was observed 90.6%, 77.1% and 41.4% respectively among BRAC school graduates, formal school graduates and non-schoolers.

In legal issues, 57.2% of the BRAC school graduates satisfied the criteria of having this type of knowledge. This rate was 50.2% among the graduates of formal schools and 37.4% among the non-schoolers. Difference between BRAC and formal school graduates was low ($p < 0.10$). But the differences between BRAC school graduates and formal school graduates with non-schoolers were highly significant (respectively, $p < 0.0001$ and $p < 0.01$).

Nearly two third of the former BRAC school students had knowledge on poultry vaccination. This rate was 57.9% among formal school graduates and 45.5% among the non-schoolers. Differences were found statistically significant ($p < 0.05$). Equal proportion (41.1%) of the respondents of BRAC and formal school graduates had knowledge on outside world, however, only 6.1% of the non-schooler respondents had this dimension of life skills knowledge. Significantly lesser proportion of non-schooling respondents had knowledge on outside world ($p < 0.0001$).

Nearly 80% of the BRAC school graduates satisfied the criteria of 'composite life skills knowledge' whereas this rate was 61.3% among the graduates of formal school graduates and 22.6% among the non-schoolers. Differences in level of composite life skills knowledge between any two groups of the respondents were found statistically significant ($p < 0.0001$).

Logistic regression models

A total of six (five for five dimensions of life skills knowledge and one for composite life skills knowledge) logistic regression models were adopted to understand the relative impact of BRAC's education programme on life skills knowledge of women of the study area. Table 4 presents the results from regression analysis. Each row of the table represents a separate regression model, where the dependent variables are shown in the first column of the table. Findings of regression analysis are presented as odds ratios and 95% confidence intervals for key variables. The models adjusted for the socio-economic characteristics described above. As the study is not concerned here with the magnitude of the effects of these socio-economic variables on life skills knowledge, their estimates are not displayed.

Findings of regression analysis shows that women who were graduated from BRAC schools showed significantly better performance in all the five dimensions of life skills knowledge compared to the non-schooling respondents. On the other hand, compared to same group formal school graduates did significantly better only in three dimensions viz., immunisation, health and hygiene, and outside world. In all the five dimensions of life skills knowledge graduates of formal schools were more likely to have better knowledge than non-schooling respondents. Otherwise, graduates of BRAC schools were more likely to have better knowledge than other two groups of respondents.

In composite life skills knowledge, formal school graduates were 3.53 times and the BRAC school graduates were 10.7 times more likely to have knowledge compared to non-schooling respondents. Differences are found statistically significant ($p < 0.001$).

Estimated probabilities of life skills knowledge

This section discusses with the potential magnitude of impact of BRAC's education programme on the life skills knowledge of women. Using five dimensions of life skills and composite life skills knowledge as dependent variables probabilities of having knowledge were estimated for selected characteristics of the respondents. These estimated probabilities are presented in Table 5. This table also gives opportunity to compare probability increase between two groups (according to their socio-economic characteristics) of respondents.

In all five dimensions of life skills knowledge as well as in the composite life skills knowledge, estimated probability of having knowledge was highest among the graduates of BRAC schools followed by the graduates of formal schools. Probability of having knowledge was least among the respondents who never went any school. Differences in probabilities, among three groups of respondents, were minimum in two dimensions of knowledge viz., legal issues and poultry vaccination. This indicates that

in these two dimensions of knowledge BRAC school's contribution was not as much as it was for other dimensions of knowledge. High probability of knowledge having in poultry vaccination among the never schooling respondents indicates that schooling was not so important in achieving this knowledge.

Comparing BRAC school graduates with non-schooling respondents it was observed that, probability of having knowledge increased more to those respondents who were enjoying better socio-economic environment than poorer respondents. On the other hand difference between formal school graduates and BRAC school graduates was more among the poorer respondents than socio-economically better off respondents.

Discussion

Like other developing countries the women of Bangladesh bears a deprived situation in all the events of their lives. Though the situation of women is improving in a slow manner but the efforts taken for this measures are very limited. The education programme of BRAC is the unique programme in this regard which is largely concentrated to rural women of Bangladesh. Through this quality education programme women are not only able to cross the literacy level also achieve such knowledge which is prior to quality life.

This study clearly demonstrates that women who were graduated from BRAC schools were more likely to have life skills knowledge than those of formal school graduates and non-schooling women. Both bivariate and multivariate analysis reflect this. Obviously some of the study women of non-schooling sample have had life skills knowledge. This may be due to nation wide campaign on some of the life skills issues or community impact of both formal and non-formal education. Development activities of the non-government organisations (NGOs) may also have contribution to it. This study found that non-schooling women had very poor knowledge on two dimensions of life skills knowledge. These are immunisation and outside world. This observation has similarity with other study that non-schooling mothers have less knowledge on child immunisation (Streetfield et. al., 93). Lesser proportion of the study women had knowledge on outside world. Probable reason of this may be the schools (both formal and non-formal) did not take care in teaching this knowledge. Another reason may be that this type of knowledge is not necessary in everyday life of the rural women in Bangladesh. Insignificant difference between the graduates of two types of schools in the knowledge of legal issues indicates equal emphasis was given by the schools in this regard. Though the proportion of BRAC school graduates was higher than others. BRAC school graduates were found significantly ($p < 0.0001$) better in all the five dimensions of life skills knowledge than those of never schooling respondents. But compared to the women of formal schools no significant difference was observed in legal issues and outside world. Better performance of the women of BRAC schools in immunisation and health and hygiene is clearly fir its curriculum. BRAC school's curriculum gives much emphasis on these issues (BRAC, 1994).

The results from the multivariate analysis also clearly shows that BRAC school had significant positive impact on life skills knowledge of the rural women of Bangladesh. Compared to the formal school graduates and the non-schooling women BRAC school

graduates were more knowledgeable in all the five dimensions of life skills and in composite life skills. Now the question arises is that whether the impact shown in the results of this study is only due to BRAC's intervention in primary education. Obviously not, in multiple regression analysis other social factors were also found responsible for life skills knowledge, which are not displayed in the findings section. But it was observed that the variable "study group" was the most important (i.e., highest responsibility) variable in the regression models. This leads the study to conclude that BRAC's education programme had significant role in raising life skills knowledge of the rural women. The probabilities estimated for different dimensions of life skills knowledge also confirms the same.

References

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Table 2: Socio-economic characteristics of the respondent women by study group

Variables	BRAC school	Formal school	Non schooling
Mean age	18.9 (2.5)	19.3 (2.2)	19.2 (2.2)
Mean years of schooling completed	4.2	5.6	na
Participation in credit programmes (%)	24.4	17.5	23.6
Mother with some schooling (%)	4.8	18.2	1.5
Father with some schooling (%)	22.2	39.6	8.1
Husband with some schooling (%)	48.8	66.0	28.7
Access to electronic media (%)	32.3	38.0	24.2
Average no of assets in the household	2.0 (1.1)	2.4 (1.2)	1.6 (1.1)
Good housing condition (%)	38.4	46.1	34.0
Landless household (%)	39.5	31.6	58.2
Labor selling household (%)	41.8	25.9	55.9

Table 3: Proportions of respondents having different dimensions of life skills knowledge by study group.

Different dimensions of life skills knowledge	BRAC		School type		Remarks		
	(1)	(2)	Formal (2)	Never (3)	(1) vs. (2)	(1) vs. (3)	(2) vs. (3)
Immunization	75.8	56.9	56.9	15.2	p<0.0001	p<0.0001	p<0.0001
Health and hygiene	90.6	77.1	77.1	41.4	p<0.0001	p<0.0001	p<0.0001
Legal issues	57.2	50.2	50.2	37.4	p<0.10	p<0.0001	p<0.01
Poultry vaccination	66.0	57.9	57.9	45.5	p<0.05	p<0.0001	p<0.01
Outside world	41.1	41.1	41.1	6.1	ns	p<0.0001	p<0.0001
Composite life skills knowledge	79.5	61.3	61.3	22.6	p<0.0001	p<0.0001	p<0.0001
N	297	297	297	297			

na = not applicable
Standard deviations are in the parentheses

Table 4: Effects of BRAC's non-formal education programme on different life skills knowledge: Odds ratios and 95% confidence intervals from logistic regression models[§]

Dependent variables	BRAC school		Independent variables:		Non schooling Odds ratio
	Odds ratio	Confidence interval (95%)	Formal school Odds ratio	Confidence interval (95%)	
Different life skills knowledge:					
Immunization	17.69***	11.20, 27.95	6.47***	4.08, 10.26	1.00
Health and hygiene	11.69***	7.16, 19.11	3.24***	2.12, 4.96	1.00
Legal issues	1.74**	1.21, 2.50	1.23	0.83, 1.82	1.00
Poultry vaccination	2.02***	1.40, 2.92	1.32	0.89, 1.94	1.00
Outside world	9.40***	5.24, 16.89	7.93***	4.33, 14.50	1.00
Composite life skills	10.70***	7.02, 16.30	3.53***	2.33, 5.36	1.00

[§] Models adjusted for age, participation in credit programmes, fathers education, mothers education, husbands education, access to electronic media, number of assets in household and housing condition.

***p<0.001 **p<0.01 *p<0.05

Table 5: Estimated probabilities* of women's having different dimensions of life skills knowledge by study groups, controlling for some selected characteristics in the logit models

Different dimensions of life skills and Study group	Characteristics	
	Age 19.1 years; father, mother and husband have some education; access to credit and media; good housing; Good number of assets	Age 19.1 years; father mother and husband have no education; no access to credit and media; bad housing; no asset
Immunization		
No schooling	.23	.09
Formal school	.66	.39
BRAC school	.84	.64
Health and hygiene		
No schooling	.34	.08
Formal school	.63	.21
BRAC school	.86	.49
Legal issues		
No schooling	.55	.14
Formal school	.60	.16
BRAC school	.68	.21
Outside world		
No schooling	.26	.04
Formal school	.74	.26
BRAC school	.77	.30
Poultry vaccination		
No schooling	.76	.58
Formal school	.80	.64
BRAC school	.86	.74
Composite life skills		
No schooling	.35	.07
Formal school	.65	.22
BRAC school	.85	.46

* $p = \exp(a + \sum \beta_i x_i) / [1 + \exp(a + \sum \beta_i x_i)]$