

Does mobilisation help change mothers' behaviour towards health and nutrition?

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SUMMARY

A study was done to assess the impact of mobilization on the change of mothers' behaviour towards health and nutrition practices. Mobilization was given by adolescent girls trained on various aspects of health and nutrition. Like regular growth monitoring of their children, immunization, colostrums feeding, complementary feeding, night blindness, hookworm infestation and hand washing practices before eating and after defecation. The adolescent girls were trained in BRAC non-formal schools in some villages of Muktagachha Upazila of Mymensingh district. They made house to house visits and mobilized and motivated the mothers on the above subjects. Mothers living in neighbouring areas but not visited by the adolescent girls were considered as non-mobilized. Results show that mobilization has important effects on some aspects of health and nutrition behaviour such as age at which complementary feeding should be started, vegetables as sources of vitamin A nightblindness, and personal hygiene like hand washing practice before eating. However, no significant difference was found between mobilized and non-mobilized mothers in respect of importance of growth monitoring, immunization, colostrum feeding and washing of hand after defecation. The reason for this is not know at present but it may be due to weakness of the mobilization procedure/programme, leakage of information from mobilized mothers to non-mobilized mothers, or gaining of knowledge by the non-mobilized mothers from other source like radio and TV. Further in-depth study is needed to resolve the question.

INTRODUCTION

BRAC started its activities in Bangladesh in 1972, with main focus on women empowerment and poverty alleviation. People's participation was the core element in programme designing. In the participatory planning stage mobilization was considered as an important factor to the success of the programme.

BRAC endeavours to initiate various programs for adolescents girls, because BRAC realizes the importance of developing their full potential as future mothers. BRAC therefore, provides both standard and health education to the adolescent girls, through various programs. In one program 11-14 years old girls (from households with <0.50 decimals of land and/or those who sold a minimum of 100 days manual labour in a year) are enrolled in non-formal primary schools, known as *Kishor-Kishori* schools. The curriculum is tailored to meet the needs of rural children in a learner-centered participatory style. Subjects taught include Bangla, Mathematics, Science, Social Science, English, Religious Education and Health Education.

During the class days, students of the schools are given a food supplement of about 640 kcal per person. Each day, a school teacher delivers health and nutrition education, in addition to the regular curriculum, and the students receive the food supplement at mid-day. The supplement is prepared and distributed by the *Graam Committee*, a group of women selected from the community. The school teachers and BRAC grassroots level workers (Programme Organisers) check the quality of the food prepared and its distribution and supervise the overall intervention activities. The food is provided to all girls attending the school irrespective of their nutritional status.

Through this curriculum the adolescent girl students learn about health, growth monitoring and preventive health care for children and also about the need of extra calories for growing children, adolescents and pregnant and lactating mothers. The adolescent girls, in return, act as young health communicators; they provide nutrition and health messages to the mothers of the locality as mobilizes. Each girl is responsible for two children under two years of age to ensure that they receive vaccines, vitamin A capsules, participate in growth monitoring sessions and that proper feeding practices are carried out by their mothers. The adolescent girls inform

the mothers about basic health and nutritional knowledge and income generation activities to improve their family life.

The purpose of the present study was to see if the mothers' behavior toward health and nutrition changes positively after being influenced by the adolescent girls.

OBJECTIVES

The general objective of the study was to assess nutritional and personal hygiene practices of the mobilised mothers and their efficiency in caring for young children, compared to those of non-mobilized mothers of comparable socio-economic status.

The specific objectives were:

- ⇒ To know their knowledge of nutritional needs of young growing children.
- ⇒ To know their knowledge regarding general health and personal hygiene.
- ⇒ To know their knowledge on the importance of immunization, and
- ⇒ To know their knowledge on common diseases children suffer from and how to care for children during these diseases.

METHODS AND MATERIALS

Study Design and Area

It was a cross sectional study comparing between two groups of mothers-one group mobilized and the other not mobilized, who have at least one child aged more than six months and who live in the same locality. The study was carried out at Muktagachha upazila in Mymensingh District.

Targeting Group

The target population was all community women who lived in the area covered by the Muktagacha Pilot Nutrition Project¹. The women had at least one under-two child during project implementation period. The baseline survey of 1991 recorded an estimated 20,000 women of childbearing age in the project area.

¹ Muktagachha Pilot Nutrition Project was initiated in 1993, the full activities began in 1994. It is a multisectoral health and nutrition project undertaken to improve the nutritional as well as socio-economic condition of mothers and children of the project area. The project area covered three villages in Muktagachha Upazila in Mymensingh district.

Sampling Size

The sampling criteria were the mothers who were mobilized by the adolescent girls trained during schooling in the *Kishor-Kishori* schools. The comparison mothers were residents of the same village, but not mobilized. One reason for their being not mobilized was that they did not have any under-2 children. Following the above criteria, the sample size for mobilized mothers was 153 and for non-mobilized mother it was 155.

Selection Procedure

Field teams of the study took the list of all BRAC non-formal primary (NFPE) schools and the list of all adolescent girls from the BRAC area office. They then visited the schools and the adolescent girls in the village. The teams talked with the adolescent girls and made a list of the mobilised mothers. They cross-checked with the mothers whether three to four years back some BRAC school students visited them. If the answer was yes, then they were considered as mobilized. The mothers' response about the visits of the adolescent girls was supported by the neighbouring households. These mothers were selected as mobilized mothers. Mothers living in the same locality but not visited by the adolescence girls were considered as non-mobilized mothers. Such mothers were also included in the study for comparison.

Data Collection

Data were collected by means of a structured questionnaire. Eight trained female interviewers collected data from July to August 1998. Data collection activities were closely supervised by an experienced BRAC field supervisor and cross checks of the completed structured questionnaires were performed at the end of each day. Focus was given on four major issues: socio-economic, nutritional knowledge, immunisation and child-care.

Data Analysis

Coding and data entry were done at BRAC head office in Dhaka. SPSSWIN software package was used for data entry and analysis. Comparison was done between the two population groups and the differences in proportions of the two groups of mothers who answered questions correctly were detected using the Pearson chi-square test. A *p* value less than 0.05 was considered as statistically significant.

RESULTS

Results show that the mean age of the study mothers was 30.4 years, the mean parity was 3.2 and the mean family size was 5.6 (Table 1). There was no significant difference between mobilized and non-mobilized mothers in their age, parity and household size. Almost 78% mothers in both groups had no formal education. They belonged to same socio-economic background, as assessed from surplus/deficit situation in their households. However, their NGO membership pattern was somewhat different. About 17% of the mobilized mothers were members of BRAC, compared with only 12.3% of non-mobilized mothers, while 16.3% of them were involved with Grameen Bank compared with 23% of the non-mobilized mothers (Table 1).

Table 1. Demographic and socio-economic characteristics of the study mothers.

Indicators	Mobilised (n = 153)	Non-mobilised (n = 155)	All (n = 308)
Age (mean ± sd)	31.1± 6.38	29.7± 5.92	30.4 ± 6.18
Parity (mean ± sd)	3.5 ± 1.89	3.0 ± 1.65	3.2 ± 1.79
Household size (mean ± sd)	5.8 ± 2.23	5.5 ± 2.19	5.6 ± 2.24
Education (%)			
No education	77.8	78.7	78.2
1 -3 grade	5.9	6.5	6.2
4-5 grade	12.4	9.7	11.0
6 + grade	3.9	5.2	4.5
Economic status (%)			
Surplus	15.0	12.3	13.6
Sufficient	31.4	36.1	33.8
Seasonal deficit	38.6	40.6	39.6
Always deficit	15.0	11.0	13.0
Membership (%)			
None	57.5	56.1	56.8
BRAC	17.0	12.3	14.6
Grameen Bank	16.3	22.6	19.5
Others	9.2	9.0	9.1

One of the most important tasks of the adolescent girls was to make house to house visits to give health and income generation and other messages to the mothers. About 43% of the mobilized mothers told that adolescent girls informed them on cleanliness and advised them to eat more vegetables for good health. Mobilised mothers also received messages from the adolescent girls on child caring practices, impasses on immunization (15.7%), raise livestock for income generation (7.8%) and learn to sign (Table 2).

Table 2. Distribution of the mothers by issues discussed during mobilization.

Issues	Mobilised mothers	
	Number	%
Personal cleanliness	65	42.5
Eat more vegetable	65	42.5
Learn to sign	40	22.2
Information on immunization	34	15.7
Plant tree and raise livestock	28	7.8

There was no difference between mobilized and non-mobilized mothers (74%-75%) in attending growth monitoring sessions (Table 3). However, appallingly, one-fourth of the mothers of either group did not attend growth monitoring sessions. They believed that it was not important to monitor the growth of their children.

Table 3. Attendance in the growth monitoring sessions.

Response	Mobilized n=153 (%)	Non-mobilized n=155 (%)	<i>p</i> -value
Yes	75.2	74.2	>.005
No	24.8	25.8	

Mothers were able to recall most of the information on immunization. Sixty three percent of the mobilized mothers and about 65% of the non-mobilized mothers had got their children fully immunized (Table 4). The data thus show that non-mobilized

mothers were equally careful about immunization of their children. In both cases (mobilized or non-mobilized), partial immunization was mostly due to non-immunization of children under 2 years of age.

Table 4. Recall knowledge on child immunisation

Received	Mobilised n = 153 (%)	Non-mobilised n = 155 (%)	p-value
Fully	63.0	64.9	>.005
Partial	37.0	35.1	

Colosturm feeding practices was rather poor in both groups. Table 5 shows that only 27.5% of mobilized mothers and 22.6% of non-mobilized mothers fed colostrum to their babies. The reason for this was quoted as not being informed about the benefit of colostrum feeding.

Table 5. Colostrum feeding of children.

Colosturm fed	Mobilized n=153 (%)	Non-mobilized n=155 (%)	p-value
Yes	27.5	22.6	>.005
No	72.6	77.4	

A significant difference ($p < .005$) was found between mobilized and non-mobilized mothers in respect of the timing of complementary feeding. It was found that 57.6% of mobilized mothers started complementary feeding to the children at the age of 5-6 months compared with only 34.8% of non-mobilised mothers doing so (Table 6). The latter started complementary feeding later.

Table 6. Age of starting complementary feeding.

Start of complementary feeding (month)	Mobilized n=153 (%)	Non-mobilized n=155 (%)	p-value
5 to 6	57.6	34.8	<.005
above 6	48.4	65.2	

Above 70% of the study mothers cooked extra food for complementary feeding of the children (Table 7). Extra food was considered as any food that was specially cooked for the children. The other mothers used regular food (cooked for all household members) for this purpose. There was no difference between mobilized and non-mobilized mothers in this respect.

Table 7. Type of food used for complementary feeding.

Pattern	Mobilized n=153 (%)	Non-mobilized n=155 (%)	p-value
Regular food	28.8	29.7	>.005
Extra food	71.2	70.3	

The mothers were also informed by the adolescent girls that vitamin A deficiency was responsible for nightblindness. There was a significant difference between mobilized and non-mobilized mothers with regard to their knowledge on the cause of nightblindness. About 74% of mobilized mothers knew about it compared with only 56.8% of non-mobilized mothers (Table 8).

Table 8. Mother's knowledge on vitamin A deficiency nightblindness.

Knowledge	Mobilized n=153 (%)	Non-mobilized n=155 (%)	p-value
Yes	73.9	56.8	<.005
No	26.1	43.2	

Question was also asked to assess mothers' knowledge on reasons of hookworm infestation. The answer was divided into two groups -- 'right' and 'wrong'. The right answer was taken as unclean environment, non-use of shoes/sandal during defecation, eating without washing these hand etc. The answer was wrong when the response was something like 'hot or cold food', 'too much chilly in curry', 'eating sweet foods, very ripe bananas or leftover/*bashi* food' etc. Table 9 shows that 49% of the mobilized mothers could answer rightly, compared with only 34.8% of non-mobilized mothers. However, this difference was not statistically significant.

Table 9. Mother's knowledge on reasons of hookworm infestation.

Answer	Mobilized n=153 (%)	Non-mobilized n=155 (%)	<i>p</i> -value
Right	49.0	34.8	>.005
Wrong	51.0	65.2	

Nearly sixty-four percent of the mobilized mothers claimed that they knew about curative methods for hookworm, 54% of the non-mobilized mothers claimed so (Table 10). The difference was statistically significant.

Table 10. Knowledge on prevention of hookworm infestation.

Answer	Mobilized n=153 (%)	Non-mobilized n=155 (%)	<i>p</i> -value
Right	64.1	54.2	<.005
Don't know	35.9	45.8	

The adolescent girls regularly disseminated to the mothers messages on personal hygiene. As mentioned before (Table 2), 42% of the mobilized mothers told that adolescent girls talked about personal cleanliness during their home visits. This brought some fruit; 17% of the mobilized mothers reported that they washed their hands by soap before eating whereas only 3.9% of non-mobilized mothers did this (Table 11). The difference was statistically significant.

Table 11. Distribution of mothers by hand washing practice before eating.

Hand washing practice before eating	Mobilized n=153 (%)	Non-mobilized n=155 (%)	<i>p</i> -value
Soap	17.0	3.9	<.005
Water	83.0	96.1	

One-third of the study mothers used hygienic latrine (Table 12). There was no difference between mobilized and non-mobilized mothers in this regard.

Table 12. Distribution of mothers by type of latrine used.

Latrine use	Mobilized n=153 (%)	Non-mobilized n=155 (%)	p-value
Hygienic	37.3	38.1	>.005
Unhygienic	62.7	61.9	

It was also found that above 88-89% of all mothers used some kind of material (soap, ash, mud) for hand washing after defecation (Table 13).

Table 13. Distribution of mothers on hand washing practice after defecation.

Washing material	Mobilised n=153 (%)	Non-mobilised n=155 (%)	p-value
Soap/ash/mud	89.2	87.7	>.005
Only water	9.8	12.3	

DISCUSSION

One of thrust areas upon which BRAC has been giving emphasis since its inception is improvement of health and nutrition condition of the rural people. Many studies have shown that in indigent communities where majority population are not literate and educated, health and nutrition related programs do not attain desired results unless the people are motivated and mobilized. Social mobilization is thus an important tool for success of such programs.

In 1993 BRAC started a multisectoral nutrition project in some villages of Muktagachha Upazila of Mymensingh district, popularly known as Muktagachha Pilot Nutrition Project. One of the components of this project was education for adolescent girls in non-formal schools. In these schools the girls were given lessons on various aspects of health and nutrition practices so that they can take care of themselves (many still growing) and their children. BRAC took the advantage of using these educated and enlightened adolescent girls for the purpose of motivation and mobilization of the mothers in the community. This served a dual purpose: growing of the adolescent girls as ideal future mothers and bringing into light the

mothers of the community from the darkness of ignorance and taboos about food, health and nutrition. The issues of mobilization included attendance in the growth monitoring sessions, immunization of the children, colostrum feeding to the newborn babies, age at which complementary feeding should be started, type of food to be fed as complementary food, nightblindness due to vitamin A deficiency, vegetables as source of vitamin A, reasons on hookworm infestation, cure of this infestation, and hand washing before eating and after defecation. The present study was an attempt to assess the efficacy of such motivational approach in bringing about change in the attitude and behaviour towards health and nutrition. The results obtained with the mobilized mothers were compared with those obtained from non-mobilized mothers of comparable socio-economic status living in nearby areas. The data used for the assessment were collected in July/August, 1998, i.e. five years after the institution of the pilot nutrition project.

The study shows that mobilization activities as carried out in the pilot nutrition project brought positive changes in some aspects but no result in some other aspects of health and nutrition behaviour of the mothers. Significant positive changes were seen in the age of start of complementary feeding, knowledge on vitamin A deficiency as the cause of nightblindness, knowledge on the cure of hookworm and hand washing before eating. In these aspects the mobilized mothers were clearly ahead of the non-mobilized mothers.

However, in respect of the importance of growth monitoring, immunization, colostrum feeding, type of food used as complementary feed, knowledge on reasons of hookworm infestation, handwashing after defecation and type of latrine used, no significant difference was discernible between the mobilized mothers and the non-mobilized mothers. This thus indicates that mobilization brings about only partial result.

There remains, however, a possibility that because the non-mobilized mothers lived in nearby areas, information given by the trained adolescent girls were somehow transacted to the neighbouring mothers. These mothers were thus actually 'mobilized' but identified as non-mobilized because the adolescent girls did not visit them. Thus, it is difficult to say whether the 'no difference' between mobilized and non-mobilized

mothers was due to weakness of the mobilization activities in bringing positive change or it was due to 'natural' leakage of information from mobilized to non-mobilized mothers, or from other sources like radio, television and other communication media. Assessment of knowledge and behaviour of the same mothers before mobilization and after mobilization could perhaps give an answer to the above questions.

It may thus be concluded that mobilization does indeed have important effect on mothers' behaviour on some aspects of health, food and nutrition of the child. However, further studies are needed to find why the program did not bring more success than obtained.

CONCLUSION

From the foregoing, it may be concluded that mobilization does bring about some positive change in the behaviour of mothers towards health and nutrition, but the changes could perhaps be better. Most pertinent changes were in the timing of the start of complementary feeding, knowledge on vegetables as sources of vitamin A which prevents nightblindness, and hand/washing before eating. More research is needed to find why no discernible changes were not seen in important behaviours relating to growth monitoring, immunization, colostrum feeding and hand washing after defecation.

SUMMARY

A study was done to assess the impact of mobilization on the change of mothers' behaviour towards health and nutrition practices. Mobilization was given by adolescent girls trained on various aspects of health and nutrition. Like regular growth monitoring of their children, immunization, colostrums feeding, complementary feeding, night blindness, hookworm infestation and hand washing practices before eating and after defecation. The adolescent girls were trained in BRAC non-formal schools in some villages of Muktagachha Upazila of Mymensingh district. They made house to house visits and mobilized and motivated the mothers on the above subjects. Mothers living in neighbouring areas but not visited by the adolescent girls were considered as non-mobilized. Results show that mobilization has important effects on some aspects of health and nutrition behaviour such as age at which complementary feeding should be started, vegetables as sources of vitamin A night blindness, and personal hygiene like hand washing practice before eating. However, no significant difference was found between mobilized and non-mobilized mothers in respect of importance of growth monitoring, immunization, colostrum feeding and washing of hand after defecation. The reason for this is not known at present but it may be due to weakness of the mobilization procedure/programme, leakage of information from mobilized mothers to non-mobilized mothers, or gaining of knowledge by the non-mobilized mothers from other source like radio and TV. Further in-depth study is needed to resolve the question.