

# **Revisiting Matlab: Repeat Survey 1999**

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## FOREWORD

Empirical evidence points to a causal relationship between the socioeconomic status of individuals and communities and their health. Indeed improvement in health is expected to follow socioeconomic development. Yet this hypothesis has rarely been tested; at least it has not undergone the scrutiny of scientific inquiry. Even less understood are the processes and mechanisms by which the changes are brought about.

The Rural Development Programme (RDP) of BRAC is a multisectoral integrated programme for poverty alleviation directed at women and the landless poor. It consists of mobilization of the poor, provision of non-formal education, skill training and income generation opportunities and credit facilities. The programme is the result of 20 years of experience through trial and error. However evaluation of its impact on human well-being including health has not been convincingly undertaken.

The Matlab field station of ICDDR, B is an area with a population of 200,000, half of whom are recipients of an intensive maternal and child health and family planning services. The entire population is part of the Center's demographic surveillance system where health and occasionally socioeconomic indicators have been collected prospectively since 1966.

A unique opportunity arose when BRAC decided to extent its field operations (RDP) to Matlab. ICDDR, B and BRAC joined hands to seize this golden occasion. A joint research project was designed to study the impact of BRAC's socioeconomic interventions on the well-being of the rural poor, especially of women and children, and to study the mechanism through which this impact is mediated.

In order to share the progress of the project and its early results, a working paper series has been initiated. This paper is an important addition in this endeavour. The project staff will appreciate critical comments from the readers.

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# **Part I: Introduction and Methodology**

## **Chapter 1: Introduction**

### **1.1 Background**

Linkage between socioeconomic development and improved health and well-being has been a matter of growing interest among social scientists and development practitioners, especially the processes and mechanisms by which the changes are brought about. The BRAC-ICDDR, B Joint Research Project at Matlab was initiated in 1992 to specifically address these issues (1). When BRAC introduced its Rural Development Programme (RDP) in Matlab in the course of its routine expansion, both the institutions recognized a unique chance to determine through a “natural experiment”, the separate and synergistic impact of socioeconomic development on improving health status and human well-being. Thus, the specific objectives of the project were: i) to assess the independent and interactive effects of BRAC’s rural development programme and ICDDR, B’s MCH-FP (Maternal and Child Health and Family Planning) Programme on health and human well-being broadly defined; ii) to understand the mechanism or pathways through which change in well-being occurs; and iii) to develop local research capacity to conduct health and development research. The concept of well-being was operationalized in terms of seven dimensions: increased income/livelihood security, increased nutritional status, decreased morbidity and mortality, control over fertility, improved women’s live and sustainable environment. Hypothetical pathways linking the BRAC programme inputs with each of the dimensions were delineated and were addressed through the research. An important goal of the project was to inform policy and programme about the intermediary factors linking project inputs and outcomes that may provide the basis of new interventions, or assist in the revision of existing programmes.

Taking advantage of prospective demographic and health data on the population of Matlab Thana collected by Demographic Surveillance System (DSS) of ICDDR, B, a four cell research design was identified comprising of a sample of villages in which: (i) only BRAC development programmes were being received; (ii) only ICDDR, B health services were present; (iii) both BRAC and ICDDR, B programmes were implemented; and (iv) a comparison cell where only government services were available (1,2).

Data collection for this project commenced in 1992 with a baseline survey of 12,000 households representing the four cells described above. As outlined in the next section, a variety of in-depth qualitative studies were subsequently undertaken to inform the design of a seasonal panel survey in 1995, which was applied to a sub-sample of households. This report presents preliminary findings from a repeat survey of the full sample of households administered in 1999. Following a discussion of study methodology, findings are presented in five sections: household demographic and socioeconomic characteristics, health, basic education and women’s lives. A final section summarizes the main findings and draws some tentative conclusions.

## 1.2 Review of activities

### *Phase I (1992-1995)*

To date, the project has completed two phases. Initiated in 1992, phase I involved the implementation of a baseline survey of 12,000 households (population over 60,000) in Matlab's DSS area (3). This was followed by a period of exploratory work, which aimed to elucidate the socioeconomic and environmental context within which RDP operates, and evaluate RDP inputs in terms of their content, implementation and adoption (4, 5, 6, 7, 8). A series of conceptual workshops were also held to identify key pathways linking socioeconomic inputs and health and other outcomes, to formulate preliminary hypothesis, and to develop qualitative and quantitative indicators (9, 10). An inter-disciplinary research team commissioned for the purpose utilized, in iterative fashion, quantitative and qualitative techniques to understand complex pathways of change and interaction.

DSS-MIS linkage: Another important activity in this phase was the establishment of an RDP-MIS by BRAC and linking this with the DSS database of ICDDR, B, thus fulfilling one key objective of the project. This linkage permits the calculation of mortality and fertility rates for the four study cell populations at an aggregate level and for BRAC members and non-members at the individual level.

Mid-term review: An in-depth review of Phase I activities as well as those proposed for Phase II, was undertaken by a team of international experts in January 1995. The team opined that the project holds great promise for path-breaking research, on the outcomes and processes of rural development interventions on health, nutrition, reproduction, and quality of life of low-income women and their families. The review team commended the progress achieved but also cautioned against the project becoming too ambitious (2).

### *Phase II (1996-2000)*

Seasonal surveys: Phase II of the project began in 1995 with the implementation of three rounds of seasonal surveys (panel survey) carried out in a sub-sample of the baseline population (3,600 households) based on the four-cell study design. This survey instrument was intended to capture (in seasonal context) intermediary pathways linking socioeconomic and health inputs to health outcomes. Survey components assessed changes in health behaviour, nutrition, household income, assets and expenditures, women's lives and fertility (unpublished reports).

Case-tracking: A small group of BRAC members and a comparable group of non-members were followed prospectively over a year to document the extent of benefit a BRAC member may have derived economically, socially and otherwise by being with BRAC compared to those who haven't.

In-depth studies: A number of in-depth studies on exploring the project's themes have been carried out. The major topics include female-headed households, maritally disrupted women, health-seeking behaviour, the performance of the BRAC schools, profitability of BRAC financed projects, and BRAC members' perception of their own status

and well-being. In this regard an instrument to measure the quality of women's life and psychological well-being has been developed and field tested.

Dissemination: In addition to reports on the baseline survey and on the nutrition, health, socioeconomic, fertility and gender components of the panel study, the project has produced 30 working papers which describe the results of in-depth studies, as well as focused analysis of baseline and panel data. Ten articles were published in peer reviewed journals at home and abroad. The project has presented its work at the Population Council in 1995, at the Annual Scientific Conferences of the ICDDR,B since 1996, at IUSSP meeting in Beijing in 1997, and at Harvard University during conceptual and analytic workshops in 1993 and 1997. More recently, a panel presentation on the "BRAC Model of Community-based Health" was made in the 26<sup>th</sup> Annual Conference of the Global Health Council by a group of researchers from the project. One doctoral dissertation and three masters were completed based on the data originating from the project (See annex).

BBC Documentary: BBC made a documentary TV programme on the health impact of microcredit in Bangladesh during May 2000. It is called 'Credit where Credit is Due' and is part of BBC World series 'Life'. It was filmed in one of the BRAC-ICDDR,B Joint Research Project village, Shilmondi, and recounts how loans affected the lives of the six poor village women, not only increasing their incomes but also helping to improve their children's health.

### **1.3 Key findings from Phases I and II (see Working Papers # 7-30)**

Before initiating BRAC's RDP in Matlab, baseline findings from 1992 survey established 'BRAC-eligible' households relatively disadvantaged according to a variety of socioeconomic, occupational, health, nutrition and education indicators compared to more wealthy 'non-eligible' households<sup>1</sup>. Gender disparities in socioeconomic status and malnutrition were also apparent in both socioeconomic groups, although absolute levels of disadvantage were greater among the 'BRAC-eligible'. A series of attitudinal questions relating to women's status, son preference, desired family size, dowry and legal and health knowledge were also assessed yet few differentiated between eligible and non-eligible groups (3).

Initial analyses of 1995 data suggest an inverse relationship between the length of involvement in BRAC and the incidence of extreme poverty. It further showed that children of mothers who joined BRAC had a higher survival probability than the comparable non-members ( $p=0.0002$ ) and statistically similar to non-target mothers ( $p=0.97$ ). The odds of death of children of the poor mothers who were non-participants were 1.5 times than that of the children of mothers who did participate.

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<sup>1</sup> BRAC eligibility criteria require that prospective member households own less than 0.05 hectares of land and sell at least 100 days of manual labour a year.

Contraceptive prevalence among women from BRAC member households was greater than those from poor non-member households (57% and 50% respectively). Also, there is some indication that BRAC member households perform better than non-member households with regard to sanitation and overall household cleanliness ( $p < 0.001$ ). Lastly, educational performance measured by the Assessment of Basic Competency (ABC) instrument improved for both children of member and non-member groups during the three years (1992-95). The gain was much greater in the case of children from BRAC member households, and more dramatic among girls than boys.

During the period between 1992 and 1995, the prevalence of severe PEM appeared to decrease significantly from 23.2 % to 14.1% among children of BRAC member households ( $p < 0.05$ ) whereas among the non-member households, the prevalence remained almost same (21.2%). Stated in terms of odds ratios, the children of BRAC members were 41 % less likely to suffer from severe malnutrition compared to non-member children ( $p < 0.05$ ). Although direct observations of intra-household food distribution undertaken in a sub-sample of households suggest that food may be more equitably distributed between sons and daughters within BRAC member households compared to eligible non-member households, gender differentials in the prevalence of severe malnutrition remain pronounced ( $p < 0.05$ ). Finally, consumption data derived from measures of 24-hour food recall indicate that an adult equivalent from a BRAC member household has 33% less chance to consume  $< 1805$  kcal/day and 28% less chance to consume  $< 2122$  kcal/day compared to non-member households ( $p < 0.001$ ).

The analysis of morbidity data collected in 1995 indicate that the prevalence of self-reported morbidity was less among BRAC member households compared to eligible non-member households ( $p < 0.001$ ) and nearly similar to non-poor non-member households. Though women of reproductive age appear to suffer equally from the burden of illness than males, they were found to seek treatment significantly less often ( $p < 0.001$ ). These gender differentials in treatment seeking most probably reflect the powerful influence of patriarchy in rural Bangladeshi society. On a more helpful note, women from BRAC member households appear more likely to use qualified allopathic care than the poor non-member counterparts, a finding which may reflect their greater comfort in interacting with the outside world. No significant differences according to membership or gender were evident between illness onset and the initiation of treatment. Data suggest that BRAC members are significantly more likely to spend more money on the treatment of male than poor non-members ( $p < 0.001$ ).

The balance of evidence suggests that in the three years since the initiation of BRAC interventions, participation in BRAC's development interventions has benefited the overall health of the household members. This might have occurred from an increase in informational and material resources for preventive and therapeutic health care such as cash income for health expenses, health and nutrition awareness, latrine construction, improved per capita calorie consumption etc. through involvement with BRAC. However, to reduce gender differentials in health, concerted programmatic efforts are required to raise community awareness about the immediate and future benefits of improving women's health, and to increase the cultural and financial accessibility of health care for women in particular.



#### **1.4 Phase III: Repeat survey 1999**

Beginning in 1999, the project embarked on a third phase of research that involved the administration of a repeat survey of the full sample of 60 villages included in the 1992 baseline survey. The goal of the repeat survey was to assess population-wide changes in health, nutritional status, fertility, socioeconomic conditions and women's lives before (1992) and seven years after (1999) implementation of BRAC's RDP in Matlab. During this phase, analyses that exploit the 4-cell design are being conducted, as well as focused studies that seek to identify major pathways of influence.

## Chapter 2: Methodology

### 2.1 Design and sampling

The same four-cell research design, guiding both the 1992 and 1995 surveys, was used in the repeat survey in 1999 (1, 2). The survey began in the 1<sup>st</sup> week of August 1999 so that it would exactly coincide with the commencement of the 1992 survey and was completed within 100 calendar days. All 60 villages sampled in 1992 were included in the repeat survey. To keep the survey manageable and cost-effective, only 25% of the non-eligible households identified in 1992 were selected randomly, compared to 50% in 1992. All eligible households (including all BRAC member households) were sampled. In total, 12,424 households were identified, of which 11,364 (91.5%) were successfully interviewed.

### 2.2 Instruments

Five sets of questionnaires (Household composition, Household economy, Women's lives, Nutrition and Basic Education) were developed in Bangla. The first three sets of questionnaires were administered to all sampled households while data on health-seeking behaviour, nutrition, and basic education were collected on a randomly selected sub-sample of households drawn from the 14 villages in which the 1995 seasonal surveys were undertaken. The 36-item short form of the Medical Outcomes Study Questionnaire (SF-36: Standard version) designed as a generic indicator of health status for use in population surveys was also administered to the above sub-sample the results from which are reported elsewhere<sup>2</sup>.

All questionnaires were pre-tested in a village outside our sample for ascertaining consistency, appropriateness of languages, sequencing of the questions, and to have an insight into the field operation procedure. These were then modified, rephrased and edited in the light of feedback received. The easily identifiable color-coded questionnaires were backed by an instruction manual in Bangla for the interviewers.

### 2.3 Field operations

All interviewers and supervisors hired for the survey had completed higher secondary school, and the majority had previous field experience. The five-day training organized for them consisted of didactic lectures followed by practice sessions at different households outside the sample villages. These were backed by long de-briefings at the end of the day. Five teams of interviewers, each led by an experienced supervisor, were deployed in five base villages about a week before beginning of the survey for rapport building activities. The day-to-day field activities

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<sup>2</sup> Ahmed SM. et al. Measuring generic health outcomes from individual's perspective: using SF-36 in a rural area of Bangladesh. Dhaka: BRAC-ICDDR,B Joint Research Project, November 2000.

of the five teams were fine-tuned by a field researcher based in BRAC Matlab office. The whole survey activity was supervised and managed by the study coordinator who made frequent field visits for spot checking the quality of interviews and providing assistance and guidance when needed. Whenever necessary, re-interview was done by the supervisors for securing reliable and valid data. Households were visited on three repeated occasions at weekly intervals, if the first attempt was not successful due to absence of the respondents. When these repeated attempts failed, the interview was called-off.

## **2.4 Quality control**

Beside intensive supervision, a random post-enumeration survey of 5% of the households surveyed in the last 72 hours was carried out. This was done by an independent quality control team on selected questions (which won't change during this period) to ensure reliability of the data.

## **2.5 Data management and analysis plan**

Each completed questionnaire was scrutinized in the field and at the field office on the same day of interview. Further scrutiny occurred at the Dhaka Head Office when data were cleaned and coded. Range and internal consistency checks were performed when data were entered in dBase. SPSS PC+ version 9 was used for analysis.

A preliminary data analysis plan was developed in keeping with the objectives of the study. In this report, data are presented in univariate and bivariate tables with frequencies and percentages. Comparisons between BRAC member households and eligible non-member households in the pre-intervention (1992) and post-intervention (1999) periods are tabulated for selected variables of interest. Comparisons are also made between 1995 (first round seasonal survey) and 1999 for certain variables not included in the baseline survey of 1992.

## Part II: Findings

### Chapter 3: Demographic characteristics

*Summary:* Comparing 1992 and 1995 surveys, there is a tangible shift to the right in the population age structure, with a marked decrease in the relative size of the under-five population. This is especially evident among BRAC households. Also, female disadvantage in terms of old age survival appears to be changing as revealed by the difference in proportion of male and female population over the age of 65 years. The percentage of illiterates dropped from 62% in 1992 to 21% for member households and 38% for non-member households in the current survey. During this period, an increase in the average years of schooling occurred. This increase is most dramatic among girls from BRAC households. Attendance at religious schools also increased substantially during this period, with higher rates observed among eligible non-member households. The greater proportion of non-Muslim households in the BRAC member group suggests that BRAC is successfully recruiting this largely disadvantaged minority population. Marital status has remained consistent over time and across membership categories. There has been a substantial decrease in the proportion of the population that is self-employed (in both agricultural and non-agricultural sectors) for both BRAC member and eligible non-member households, and an apparent shift to wage labour. An alarming increase in the proportion of destitute persons (too old or sick to work, beggars, disabled, etc.) during this period, also warrants attention.

#### 3.1 Age and sex

The distribution of the study population by age, sex, household's BRAC membership status, and year of survey is shown in Table 3.1. The composition is consistent across membership categories with nearly 50% of the population aged  $\leq 19$ . In addition, the distribution reflects the aging of the study population (mean age increased from 23.5 yrs in 1992 to 25 yrs in 1999). An apparent decline in the proportion of under-fives from 13.5% in 1992 to less than 11% in 1999 suggests lower fertility among both member and non-member populations. The greater proportion of older persons aged 60+ years among the eligible non-member population is also noteworthy, and may possibly reflect higher levels of mortality or migration in younger age cohorts compared to the BRAC members. Interestingly, the proportion of older women from BRAC member households is greater by 1% compared to men in 1999 while the proportion was similar in 1992.

#### 3.2 Religion

Table 3.2 shows the religion of the study populations by year of survey and household's BRAC membership status. In 1999, there are a higher percentage of non-Muslims among the BRAC member households. The opposite is true for the Muslim population, with a higher proportion evident in the eligible non-member group. This is probably a reflection of BRAC's successful attempt to engage the minority non-Muslim population in their programmes, a group that tends to be more socially and economically disadvantaged than the majority population.

**Table 3.1: Age and sex distribution of the study population by year of survey and BRAC membership status of the households, Matlab**

| Age (years)      | 1992 BRAC-eligible (%) |           |           | 1999 BRAC-eligible (%) |           |           |            |           |           |
|------------------|------------------------|-----------|-----------|------------------------|-----------|-----------|------------|-----------|-----------|
|                  |                        |           |           | Member                 |           |           | Non-member |           |           |
|                  | M                      | F         | All       | M                      | F         | All       | M          | F         | All       |
| 0 - 4            | 13.7                   | 13.3      | 13.5      | 9.9                    | 9.8       | 9.8       | 11.5       | 10.6      | 11.0      |
| 5 - 9            | 15.8                   | 14.6      | 15.2      | 13.1                   | 13.0      | 13.1      | 14.3       | 12.6      | 13.5      |
| 10 - 14          | 13.6                   | 11.3      | 12.4      | 17.5                   | 15.0      | 16.3      | 15.0       | 14.0      | 14.5      |
| 15 - 19          | 10.8                   | 9.4       | 10.2      | 11.8                   | 10.4      | 11.1      | 11.3       | 9.2       | 10.2      |
| 20 - 24          | 7.8                    | 8.7       | 8.3       | 7.8                    | 7.0       | 7.4       | 7.0        | 7.0       | 7.0       |
| 25 - 29          | 6.8                    | 9.6       | 8.2       | 4.9                    | 6.0       | 5.5       | 5.6        | 7.3       | 6.5       |
| 30 - 34          | 7.8                    | 7.8       | 7.8       | 5.3                    | 8.7       | 7.0       | 5.4        | 8.6       | 7.0       |
| 35 - 39          | 5.0                    | 5.2       | 5.1       | 6.9                    | 9.1       | 8.0       | 7.2        | 7.8       | 7.5       |
| 40 - 44          | 4.0                    | 4.3       | 4.1       | 6.8                    | 5.8       | 6.3       | 6.3        | 5.5       | 5.9       |
| 45 - 49          | 3.3                    | 4.0       | 3.7       | 4.6                    | 4.0       | 4.3       | 4.0        | 3.8       | 3.9       |
| 50 - 54          | 3.3                    | 3.7       | 3.5       | 3.1                    | 2.9       | 3.0       | 3.2        | 3.3       | 3.3       |
| 55 - 59          | 2.8                    | 2.7       | 2.7       | 3.1                    | 2.9       | 3.0       | 2.7        | 3.3       | 3.0       |
| 60 - 64          | 2.2                    | 2.2       | 2.2       | 2.4                    | 1.8       | 2.1       | 2.5        | 2.4       | 2.5       |
| 65+              | 3.1                    | 3.2       | 3.1       | 2.7                    | 3.7       | 3.2       | 4.1        | 4.5       | 4.3       |
| <b>Mean ± sd</b> | 22.8±18.5              | 23.9±18.5 | 23.5±18.6 | 24.3±18.2              | 25.2±18.3 | 24.8±18.3 | 24.6±19.2  | 25.9±19.1 | 25.2±19.2 |
| <b>n</b>         | 19087                  | 18990     | 38077     | 5030                   | 5187      | 10217     | 17793      | 18716     | 36509     |

**Table 3.2: Religion of the study population by year of survey and BRAC membership status of the households, Matlab**

| Religion   | 1992 BRAC-eligible (%) |              |              | 1999 BRAC-eligible (%) |             |              |              |              |              |
|------------|------------------------|--------------|--------------|------------------------|-------------|--------------|--------------|--------------|--------------|
|            |                        |              |              | Member                 |             |              | Non-member   |              |              |
|            | M                      | F            | All          | M                      | F           | All          | M            | F            | All          |
| Muslim     | 86.3                   | 86.7         | 86.2         | 84.7                   | 84.4        | 84.5         | 87.4         | 88.0         | 87.7         |
| Non-Muslim | 13.7                   | 13.3         | 13.8         | 15.3                   | 15.6        | 15.5         | 12.6         | 12.0         | 12.3         |
| <b>n</b>   | <b>19087</b>           | <b>18990</b> | <b>38077</b> | <b>5030</b>            | <b>5187</b> | <b>10217</b> | <b>17793</b> | <b>18716</b> | <b>36509</b> |

### 3.3 Education

Improvements in literacy rates across the eligible population are evident during 1992-1999 regardless of membership status (Table 3.3). The greatest improvements occurred among females with the percentage of illiterates dropping from 62% in 1992 to 21% for members and 38% for non-members in the 1999 survey.

There has been a marked increase in years of schooling for the entire population. Again, the greatest increases occurred among females. Since 1992, the proportion of females with more than 5 years of education has more than quadrupled. This is true for both members and non-members. The corresponding male percentage doubled since the baseline survey. Compared to 1992, attendance at religious schools also increased during this period, with higher percentages among non-members than members, though this was only 0.5% of those going to school. Findings on other aspects of education such as enrolment and quality of education are discussed in Chapter 7.

**Table 3.3: Literacy and place of schooling of the study population (6+ years) by year of survey and BRAC membership status of the households, Matlab**

| Literacy and schooling           | 1992<br>BRAC-eligible (%) |              |              | 1999 BRAC-eligible (%) |             |             |              |              |              |
|----------------------------------|---------------------------|--------------|--------------|------------------------|-------------|-------------|--------------|--------------|--------------|
|                                  |                           |              |              | Member                 |             |             | Non-member   |              |              |
|                                  | M                         | F            | All          | M                      | F           | All         | M            | F            | All          |
| <b>Literacy*</b>                 |                           |              |              |                        |             |             |              |              |              |
| None (Illiterate)                | 54.7                      | 69.1         | 61.9         | 21.7                   | 20.7        | 21.2        | 24.3         | 37.8         | 31.3         |
| Literate, but no schooling       | 3.6                       | 3.1          | 3.4          | 15.6                   | 26.3        | 21.1        | 15.1         | 12.7         | 13.9         |
| Hafiz-e-Quran                    | 0.1                       | --           | 0.1          | 0.5                    | --          | 0.2         | 0.6          | --           | 0.3          |
| 1 -5 years of schooling          | 30.8                      | 23.5         | 27.2         | 38.2                   | 33.4        | 35.8        | 36.1         | 31.8         | 33.8         |
| >5 years of schooling            | 10.7                      | 4.3          | 7.5          | 24.0                   | 19.5        | 21.7        | 24.0         | 17.7         | 20.7         |
|                                  |                           |              |              |                        |             |             |              |              |              |
| <b>Place of formal schooling</b> |                           |              |              |                        |             |             |              |              |              |
| None (Not a student)             | 58.3                      | 72.2         | 65.3         | 37.4                   | 47.1        | 42.3        | 39.4         | 50.6         | 45.2         |
| Madrasha (Religious School)      | 0.1                       | --           | 0.1          | 1.8                    | 0.7         | 1.2         | 2.6          | 1.2          | 1.9          |
| Primary                          | 30.8                      | 23.5         | 27.2         | 42.9                   | 38.6        | 40.8        | 41.1         | 36.6         | 38.7         |
| Secondary                        | 10.1                      | 4.2          | 7.2          | 16.4                   | 13.0        | 14.7        | 15.5         | 11.2         | 13.3         |
| Higher secondary and others      | 0.6                       | 0.1          | 0.4          | 1.4                    | 0.5         | 1.0         | 1.4          | 0.6          | 1.0          |
| <b>n</b>                         | <b>15356</b>              | <b>15465</b> | <b>30821</b> | <b>4327</b>            | <b>4500</b> | <b>8827</b> | <b>14975</b> | <b>15991</b> | <b>30966</b> |

\* defined as ability to both read and write

### 3.4 Marital Status

The distribution of marital status of the study population remained consistent over time and across membership category (Table 3.4). The majority of both men and women are currently married. There are a slightly larger percentage of women in BRAC member households who have never been married at the time of the 1999 survey compared to eligible non-members in both 1992 and 1999. Men who have never been married comprised a greater percentage of the population than their female counterparts at each survey and across membership status. Women who are widows significantly outnumber men who are widowers, suggesting that men are more likely to remarry after a spouse's death. Alternatively, this may be a reflection of the spousal age gap (appx. 7 to 10 years) at the time of marriage commonly seen in Bangladesh, especially in the rural areas.

**Table 3.4: Marital status of the study population (10+ years) by year of survey and BRAC membership status of the households, Matlab**

| Marital status    | 1992<br>BRAC-eligible (%) |              |              | 1999 BRAC-eligible (%) |             |             |              |              |              |
|-------------------|---------------------------|--------------|--------------|------------------------|-------------|-------------|--------------|--------------|--------------|
|                   |                           |              |              | Member                 |             |             | Non-member   |              |              |
|                   | M                         | F            | All          | M                      | F           | All         | M            | F            | All          |
| Never married     | 46.2                      | 28.6         | 37.1         | 45.9                   | 31.9        | 38.7        | 44.6         | 29.2         | 36.6         |
| Currently married | 52.7                      | 57.2         | 55.1         | 52.9                   | 54.9        | 53.9        | 53.8         | 56.0         | 55.0         |
| Widower/widow     | 0.9                       | 12.9         | 7.0          | 0.9                    | 11.9        | 6.5         | 1.3          | 13.0         | 7.4          |
| Others*           | 0.2                       | 1.3          | 0.7          | 0.3                    | 1.4         | 0.8         | 0.3          | 1.8          | 1.1          |
| <b>n</b>          | <b>13178</b>              | <b>13473</b> | <b>26651</b> | <b>3703</b>            | <b>3848</b> | <b>7551</b> | <b>12681</b> | <b>13833</b> | <b>26514</b> |

\*divorced/separated/abandoned

### 3.5 Occupation

Table 3.5 shows the occupational status of the study population. There has been a secular decrease in the percentage of self-employed men in both the agricultural and non-agricultural<sup>3</sup> sectors since the 1992 survey. It appears that some of these men may have shifted into wage labour given the dramatic increases in this sector from 1992 to 1999. Among non-member males, however, unemployment has increased, suggesting an alternative explanation for this segment of the population. Finally, the student proportion of the population has increased since 1992, with a slightly higher percentage increase among girls, and in BRAC member households. Given explicit policies dictating that 60% of enrolment in BRAC non-formal primary schools be female, greater gender equity is apparent in the BRAC member group. Finally, an alarming increase in the proportion of destitute persons is apparent during 1992-1999. The reasons for this require further investigation.

**Table 3.5: Occupation of the study population (6+ years) by year of survey and BRAC membership status of the households, Matlab**

| Occupation                   | 1992<br>BRAC-eligible (%) |              |              | 1999 BRAC-eligible (%) |             |             |              |              |              |
|------------------------------|---------------------------|--------------|--------------|------------------------|-------------|-------------|--------------|--------------|--------------|
|                              | M                         | F            | All          | Member                 |             |             | Non-member   |              |              |
|                              |                           |              |              | M                      | F           | All         | M            | F            | All          |
| Agriculture (self-employed)  | 13.0                      | 0.1          | 6.6          | 5.1                    | 0.1         | 2.6         | 4.8          | 0.1          | 2.4          |
| Wage labour (agri/ non-agri) | 18.9                      | 0.5          | 9.7          | 23.9                   | 1.4         | 12.5        | 25.6         | 1.1          | 13.0         |
| Service                      | 6.6                       | 0.6          | 3.6          | 6.1                    | 1.2         | 3.6         | 6.5          | 0.8          | 3.5          |
| Trade/business               | 8.9                       | 0.1          | 4.5          | 10.0                   | 0.3         | 5.1         | 9.2          | 0.1          | 4.5          |
| Self-employed                | 22.5                      | 10.5         | 16.5         | 11.7                   | 1.8         | 6.7         | 9.1          | 0.9          | 4.8          |
| Student                      | 23.3                      | 18.6         | 20.9         | 33.9                   | 33.4        | 33.6        | 32.0         | 29.9         | 30.9         |
| Domestic work                | 0.3                       | 65.1         | 32.7         | 0.4                    | 53.6        | 27.6        | 0.4          | 58.0         | 30.1         |
| Unemployed                   | 6.5                       | 4.3          | 5.4          | 6.4                    | 4.2         | 5.2         | 8.3          | 4.2          | 6.2          |
| Others <sup>4</sup>          | 0.1                       | 0.0          | 0.1          | 2.4                    | 3.9         | 3.2         | 4.2          | 4.8          | 4.5          |
| <b>n</b>                     | <b>15356</b>              | <b>15465</b> | <b>30821</b> | <b>4327</b>            | <b>4500</b> | <b>8827</b> | <b>14975</b> | <b>15991</b> | <b>30966</b> |

<sup>3</sup> Boatman, Rickshaw/van puller, Sareng, Cobbler, Goldsmith/Blacksmith, Tailor, Barber, Carpenter/plumber, Mason, Private-tutor, Private Doctor, other HCPs, Pleader, Contractor, Electrician/technician, Animal husbandry, Weaver, Other handicrafts, circumcision practitioners, Singer

<sup>4</sup> Too old, beggar, disabled/too sick to work,

## Chapter 4: Socioeconomic characteristics

*Summary:* The material well-being of the BRAC households continued to improve as shown by the consistently greater asset base of these households in 1999 despite the devastating flood of the previous year. Also, these households gained greater food security and economic solvency than their counterparts. Compared to 1992, there has been an increase in the proportion of landless households, with a slightly higher percentage among eligible non-member households. Concomitantly, the proportion of households possessing more than 100 decimals of land decreased particularly in the non-member group. There has been a shift in the reported highest source of income from agriculturally based activities to wage-labour, irrespective of BRAC membership status. A small increase in the percentage of households earning the major share of their income from trade/business is also noted.

### 4.1 Land holdings

Distribution of land holding by year of survey and membership status is shown in Table 4.1. Compared to 1992, there has been an increase in the proportion of landless households, with a slightly higher percentage evident among non-member households.

Approximately 11% of member households and 8% of eligible non-member households possess more than 50 decimals of land in 1999, representing a decline of 2-5% since 1992. Also, proportion of eligible households possessing more than 100 decimals of land has decreased since 1992, most dramatically among eligible non-BRAC households. These findings suggest a trend toward greater concentration of land ownership and wealth.

**Table 4.1: Land-holdings of the household by year of survey and BRAC membership status of the households, Matlab**

| Land-holdings (decimals) | 1992 BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|--------------------------|------------------------|------------------------|-------------|
|                          |                        | Member                 | Non-member  |
| 0 (none)                 | 10.7                   | 13.3                   | 15.7        |
| 1 - 50                   | 76.0                   | 76.1                   | 76.1        |
| 51 - 100                 | 8.6                    | 7.3                    | 6.6         |
| 101 +                    | 4.8                    | 3.4                    | 1.6         |
| <b>n</b>                 | <b>7246</b>            | <b>1924</b>            | <b>7518</b> |

### 4.2 Highest source of household income

Information on household's highest source of income is given in Table 4.2. Wage labour is the most commonly cited source by both the member and non-member households. These data suggest movement away from traditional sources of income. There have been decreases in the percentage of households reporting agricultural self-employment, agricultural labour, and fishing as major sources of income. Also, small increases in the percentage of households citing major source of income from trade/business is noted.



There is little difference between members and non-members across source of income categories in 1999 although a slightly higher proportion of non-member households relied on service as their main source of income. Somewhat higher percentages of member households rely on agricultural self-employment and trade/business than non-member households.

**Table 4.2: Reported major household income source in the past year by year of survey and BRAC membership status of the households, Matlab**

| Highest source of income in the past year | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|---|---------------------------|------------------------|-------------|
|   |                           | Member                 | Non-member  |
| Agriculture (self-employed)               | 14.3                      | 11.2                   | 9.8         |
| Agri-labour                               | 22.0                      | 10.4                   | 10.9        |
| Wage-labour                               | 11.9                      | 28.7                   | 28.0        |
| Trade/business                            | 13.0                      | 16.7                   | 15.1        |
| Service                                   | 11.2                      | 11.9                   | 13.8        |
| Fishing                                   | 6.1                       | 4.2                    | 4.4         |
| Boat/rickshaw                             | 5.5                       |                        |             |
| Other(s)                                  | 16.0                      | 17.0                   | 18.0        |
| <b>n</b>                                  | <b>7246</b>               | <b>1924</b>            | <b>7518</b> |

Other category includes poultry/vegetables, handicrafts, FFW/VGD card, remittance from abroad, and others

#### 4.3 Assets

Table 4.3 indicates a general improvement of socioeconomic status as reflected in greater asset ownership. Mosquito nets are the most commonly owned asset followed by poultry. There is an increase in the percentage of households for each asset category in 1999 survey compared to 1992—markedly so for chair, table, and radio categories. These increases are consistently greater among BRAC member households. A remarkable increase in the ownership of sanitary latrines is also noted in 1999, especially among BRAC households.

**Table 4.3: Some selected assets of the household by year of survey and BRAC membership status of the households, Matlab**

| Selected assets  | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|------------------|---------------------------|------------------------|-------------|
|                  |                           | Member                 | Non-member  |
| Chair            | 26.6                      | 46.0                   | 42.2        |
| Table            | 23.4                      | 49.1                   | 42.0        |
| Radio            | 12.2                      | 20.3                   | 17.3        |
| Cycle            | 1.3                       | 4.5                    | 3.6         |
| Mosquito net     | 73.9                      | 91.6                   | 89.7        |
| Sanitary latrine | 3.3                       | 7.9                    | 6.7         |
| <b>n</b>         | <b>7246</b>               | <b>1924</b>            | <b>7518</b> |

#### 4.4 Household food-sufficiency

Slight improvements in food security are apparent from 1992 to 1999 among BRAC member households as indicated by a rise in the proportion of households with food supplies sufficient for the 3-4/5-6 months, and a decline in the proportion of food scarce households ( $\leq$  1-2 months supply) (Table 4.4). For eligible non-members, differences in household food sufficiency are less apparent over the period 1992 to 1999. The most dramatic difference is the larger percentage of non-member households reporting an inability to support food requirements for one month in 1999 compared to 1992.

**Table 4.4: Household's food-sufficiency by year of survey and BRAC membership status of the households, Matlab**

| Food-sufficiency (# months) | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |            |
|-----------------------------|---------------------------|------------------------|------------|
|                             |                           | Member                 | Non-member |
| 0                           | 50.1                      | 47.9                   | 52.9       |
| 1 - 2                       | 13.9                      | 10.9                   | 11.2       |
| 3 - 4                       | 12.2                      | 13.6                   | 12.5       |
| 5 - 6                       | 12.1                      | 15.8                   | 13.7       |
| 7 - 8                       | 3.2                       | 2.7                    | 2.7        |
| 9 - 10                      | 1.9                       | 2.2                    | 1.6        |
| 11 - 12                     | 6.6                       | 6.9                    | 5.4        |

#### 4.5 Household's outstanding loans

Data on outstanding loans most likely reflect member participation in BRAC's credit programme, with over 90% of member households reporting an outstanding loan compared to 61% of all eligible households in 1992 (Table 4.5). Similar to 1992 figures, approximately 69% of non-member households report having outstanding loans.

**Table 4.5: Household's outstanding loans by year of survey and BRAC membership status of the households, Matlab**

| Household's outstanding loans | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |            |
|-------------------------------|---------------------------|------------------------|------------|
|                               |                           | Member                 | Non-member |
| Yes                           | 61.0                      | 90.6                   | 68.7       |
| No                            | 39.0                      | 9.4                    | 31.3       |

#### 4.6 Economic solvency status of households

Table 4.6 indicates an improvement in the perceived economic solvency of all sampled households during 1992-1999. A greater proportion of respondents evaluated their household's status as "break-even" in 1999 in both member and non-member categories, while 'always deficit' households decreased from 18.1 to 13.0 and 14.5 for member and non-member households respectively. In addition, 'surplus' households made up a larger percentage

of the population in 1999, particularly among BRAC households. Taken together, these data suggest that member households may be enjoying greater economic performance than their non-member counterparts.

**Table 4.4: Perceived economic solvency status of household by year of survey and BRAC membership status of the households, Matlab**

| Perceived economic solvency of households | 1992 BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|---|------------------------|------------------------|-------------|
|   |                        | Member                 | Non-member  |
| Always deficit                            | 18.1                   | 13.0                   | 14.5        |
| Occasional deficit                        | 46.7                   | 36.9                   | 39.4        |
| Break-even                                | 32.3                   | 44.3                   | 41.9        |
| Surplus                                   | 2.9                    | 5.8                    | 4.2         |
| <b>n</b>                                  | <b>7246</b>            | <b>1924</b>            | <b>7518</b> |

## Chapter 5: Health

**Summary:** Use of safe water for household purposes (other than drinking) has increased considerably since 1992, especially among BRAC households. Encouragingly, a larger percentage of the study population is currently using sanitary latrines compared to the 1992 survey, albeit to a lesser extent among BRAC households. Small difference in morbidity prevalence was noted among BRAC households comparing 1992 and 1999, but no difference between BRAC member and eligible non-member households. The proportion for which no health-care was sought outside the household and were managed by self-care/self-treatment only, increased sharply in 1999 compared to 1995. Also, there was a dramatic drop in the use of traditional medicine and semi-qualified/qualified allopaths. A general awareness of immunization and a decrease in the prevalence of nightblindness are noted. The proportion of severe malnutrition in children aged 6-72 months has decreased over the 7 year period as measured by MUAC (<125 mm) and 'Wt/Age<-2z'; both the proportions of 'wasted' and 'stunted' children (13-72 months) have decreased, but especially among eligible non-BRAC households. No change in the nutritional status of adult women was noted during the study period. In 1999, a larger proportion of women are currently using contraception than was reported in 1992, especially among BRAC members. Family composition, however, has remained relatively unchanged. A sharp increase in AIDS awareness occurred since 1995 among BRAC women. Irrespective of BRAC membership status of households, a greater percentage of respondents are aware of the preventive role of condom in HIV transmission although change in condom use is negligible.

### 5.1 Water and sanitation

The source of water for a cooking, cleaning and bathing is provided in Table 5.1. Comparing surveys in 1992 and 1999, there is an overall increase in the percentage of households using safe water, which is slightly more apparent among BRAC member households. This increase in use of safe water is highest for cooking and most probably reflects the increased use of tube-well for drinking purposes. However, most households, both member and non-member, continued to use unsafe water.

Table 5.2 indicates the method of human waste disposal by sex and BRAC membership. It is encouraging to note that in 1999, a larger proportion of men and women report using sanitary latrines than 1992. Although the use of sanitary latrine is slightly higher among non-members, they are also more likely to defaecate 'anywhere' compared to those of member households.

### 5.2: Morbidity

The information on household illness and related health-seeking behaviour was solicited from the spouse of the household head or any knowledgeable female member of the family. In the case of children, mothers were interviewed. All illness episodes occurring among household members during the preceding two weeks were

elicited and lay reporting of symptoms noted. Symptoms were then classified into categories or “types” of illnesses by means of a pre-tested coding system, and cross-checked by a physician. When more than one episode of illness was reported, data were collected with reference to the major illness, i.e. illness which was the longest in duration. Efforts to improve the reliability and validity of illness reporting included the use of culturally appropriate language, limiting the recall period to 15 days, and deploying an independent quality control team to re-survey 5% of the household sample within three days of the main survey. Additionally, during training, interviewers were instructed on how to establish an atmosphere of neutrality conducive to the collection of accurate and complete reports of treatment action.

Table 5.3 indicates the prevalence of morbidity comparing 1995 and 1999 surveys as no such data were collected in 1992. A slight increase in morbidity prevalence was noted among BRAC households comparing 1992 and 1999, but no difference between BRAC member and eligible non-member households. The most commonly reported illnesses were fever, gastrointestinal problems and pains/aches, with slight variations in order depending on gender. Compared to 1995, there also appears to be an overall decrease in the reporting of different types of fevers and an increase in respiratory and skin and ENT diseases. As in 1995, the proportion of females reporting illness was found to be slightly higher than males (not shown).

**Table 5.1: Safety of water sources by year of survey and BRAC membership status of the households, Matlab**

| Use of safe and unsafe water* | 1992<br>BRAC-eligible (%) |      | 1999 BRAC-eligible (%) |      |            |      |
|-------------------------------|---------------------------|------|------------------------|------|------------|------|
|                               |                           |      | Member                 |      | Non-member |      |
|                               | Monsoon                   | Dry  | Monsoon                | Dry  | Monsoon    | Dry  |
| <i>Cooking</i>                |                           |      |                        |      |            |      |
| Safe                          | 4.8                       | 4.8  | 13.2                   | 13.7 | 11.3       | 12.1 |
| Unsafe                        | 95.2                      | 95.2 | 86.6                   | 86.1 | 88.6       | 87.9 |
| <i>Cleaning utensils</i>      |                           |      |                        |      |            |      |
| Safe                          | 2.4                       | 2.6  | 8.6                    | 9.1  | 7.9        | 8.5  |
| Unsafe                        | 97.6                      | 97.4 | 91.1                   | 90.4 | 91.9       | 91.3 |
| <i>Bathing</i>                |                           |      |                        |      |            |      |
| Safe                          | 0.9                       | 1.1  | 3.6                    | 4.2  | 3.0        | 3.4  |
| Unsafe                        | 99.1                      | 98.9 | 96.2                   | 95.6 | 96.9       | 96.5 |

\*safe source: tube-well; unsafe source: river/canal/pond/ditch etc.

**Table 5.2: Types of latrines used by year of survey and BRAC membership status of the households, Matlab**

| Type of latrine  | 1992<br>BRAC-eligible (%) |      | 1999 BRAC-eligible (%) |      |             |      |
|------------------|---------------------------|------|------------------------|------|-------------|------|
|                  |                           |      | Member                 |      | Non-member  |      |
|                  | M                         | F    | M                      | F    | M           | F    |
| Anywhere         | 5.6                       | 2.0  | 1.6                    | 0.8  | 2.6         | 1.2  |
| Fixed place      | 91.0                      | 94.8 | 90.0                   | 90.7 | 87.7        | 89.1 |
| Sanitary latrine | 3.4                       | 3.2  | 8.4                    | 8.5  | 9.7         | 9.6  |
| <b>n</b>         | <b>7246</b>               |      | <b>1921</b>            |      | <b>7491</b> |      |

### 5.3: Health-seeking behaviour

Data on types of health care sought were obtained by asking the respondents about the nature and order of treatment measures undertaken at home or elsewhere. When more than one health care provider was contacted, data with reference to the first one contacted were collected. These treatments were subsequently grouped into five categories. The category 'self-treatment' comprises forms of self-treatment/self-care with drugs (e.g., analgesics, anti-pyretic, antacids, ORS etc.), which are commonly available in rural households and taken without prescription. This also includes various indigenous methods undertaken by household members without seeking help from outside the household. The category 'traditional' includes treatment seeking within faith healing and traditional systems of medicine such as *kabiraji/hekimi* and a very negligible proportion of homeopathy. The category 'unqualified allopaths' refers to itinerant and untrained pharmacists, market-sellers, and road-side 'quacks' who practice allopathic medicine with little or no professional training. The 'para-professionals' category of treatment-seeking consists of consultation with: *palli chikitsoks* (village practitioners who receive a year-long training in diagnosing and treating common rural ailments); medical assistants (who undertake a comprehensive three-year medical training); and government and non-government community health workers who obtain a very basic preventive and curative health training and treat mainly with allopathic drugs. The 'qualified allopaths' are individuals who have undergone professional medical training.

The treatment-seeking pattern of the study population has undergone some very interesting changes during this period. While in 1995, around one-third of the sick population did not seek any treatment from any type of health-care provider, that is, they were managed by self-care/self-treatment, this proportion increased to around 50% in 1999 (Table 5.4). Of concern is the fact that the proportion using nonqualified practitioners of allopathic medicine ('unqualified allopath') continued to increase in 1999 compared to 1995, at the cost of decreasing the preferable use of semi-qualified allopaths (community health workers, para-professionals etc.) than they did in 1995. At the same time, there was a concomitant drop in the use of qualified allopaths, more pronounced in case of poor non-member households. Also, of note, is a decline in the proportion of ill persons relying on the use of traditional medicine, especially among BRAC households (from around 10% in 1995 to around 3.5% in 1999).

**Table 5.3: Morbidity prevalence and illness profile by year of survey and BRAC membership status of the households, Matlab\***

| Morbidity                             | 1995 BRAC-eligible Households (%) |             | 1999 BRAC-eligible Households (%) |              |
|---------------------------------------|-----------------------------------|-------------|-----------------------------------|--------------|
|                                       | Member                            | Non-member  | Member                            | Non-member   |
| Prevalence of illness in last 15 days | 12.9                              | 20.4        | 16.0                              | 16.6         |
| <b>n</b>                              | <b>3147</b>                       | <b>7495</b> | <b>10215</b>                      | <b>36505</b> |

| Illness profile                                   |            |             |            |             |
|---|------------|-------------|------------|-------------|
| Fever of all types                                | 45.2       | 45.5        | 33.0       | 27.9        |
| Gastrointestinal diseases                         | 20.9       | 20.7        | 20.7       | 19.6        |
| Pain/aches of all types                           | 14.3       | 11.5        | 21.4       | 17.8        |
| Respiratory diseases                              | 5.4        | 5.7         | 10.8       | 16.0        |
| Skin/Eye/ENT diseases                             | 3.7        | 4.1         | 5.0        | 8.8         |
| Others (pregnancy/RTIs, deficiency diseases etc.) | 10.6       | 12.6        | 9.1        | 10.1        |
| <b>n</b>  | <b>407</b> | <b>1527</b> | <b>397</b> | <b>1487</b> |

\*In 1995, morbidity prevalence was measured in 14 villages (where in-depth seasonal survey was done) only whereas in 1999, this was done in all baseline villages i.e., 60 villages. In both 1992 and 1999, illness profile was done in 14 villages only

**Table 5.4: Health-seeking behaviour by year of survey and BRAC membership status of the households, Matlab\***

| Health care sought in last 15 days | 1995 BRAC-eligible Households (%) |             | 1999 BRAC-eligible Households (%) |             |
|------------------------------------|-----------------------------------|-------------|-----------------------------------|-------------|
|                                    | Member                            | Non-member  | Member                            | Non-member  |
| Traditional*                       | 12.1                              | 9.1         | 2.7                               | 4.5         |
| Unqualified allopaths              | 24.9                              | 16.3        | 28.7                              | 26.8        |
| Para-professionals                 | 20.7                              | 41.9        | 11.4                              | 13.4        |
| Qualified allopaths                | 12.1                              | 6.8         | 6.6                               | 5.1         |
| Self-care/self-treatment           | 30.3                              | 26.0        | 50.6                              | 50.3        |
| <b>n</b>                           | <b>406</b>                        | <b>1520</b> | <b>334</b>                        | <b>1106</b> |

\**kabiraji, hekimi, faith healing etc.*; also include negligible proportion of homeopath

## 5.4: Child health

### 5.4.1 Immunization

A decrease in the proportion of completely immunized children was found in 1999 compared to 1992 (Table 5.5). This is true for both members and non-members. This decrease is explained, at least in part, by the high percentage of children whose immunization was ongoing in 1999. A slight decline in the percentage of those who have not been immunized at all ("Nil") suggests greater awareness of the importance of prevention.

**Table 5.5: Immunization status by year of survey and BRAC membership status of the households, Matlab**

| Immunization status (0-2 yrs) | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|-------------------------------|---------------------------|------------------------|-------------|
|                               |                           | Member                 | Non-member  |
| Complete                      | 73.4                      | 56.6                   | 56.8        |
| Incomplete                    | 15.5                      | 34.0                   | 36.0        |
| Nil                           | 11.1                      | 9.4                    | 7.1         |
| <b>n</b>                      | <b>868</b>                | <b>438</b>             | <b>1781</b> |

#### 5.4.2 Vitamin A Capsule distribution and nightblindness

Consistent with the rise in the proportion of children receiving Vitamin A capsules, there has been an apparent decrease in the prevalence of nightblindness in the population as a whole (Table 5.6). In both 1992 and 1999, the prevalence of night blindness among boys is greater than girls in member and non-member groups.

**Table 5.6: Prevalence of night blindness and Capsule Vitamin 'A' distribution among children (aged 6m to 6 yrs) by year of survey and BRAC membership status of the households, Matlab**

| Night blindness and Cap Vit 'A'                             | 1992<br>BRAC-eligible (%) |             | 1999 BRAC-eligible (%) |            |             |             |
|---|---------------------------|-------------|------------------------|------------|-------------|-------------|
|   | M                         | F           | Member                 |            | Non-member  |             |
|   |                           |             | M                      | F          | M           | F           |
| <b>Night blindness (6m-6yr)</b>                             |                           |             |                        |            |             |             |
| Yes   | 1.9                       | 1.5         | 0.8                    | 0.2        | 0.4         | 0.6         |
| No  | 98.1                      | 98.5        | 99.2                   | 99.8       | 99.6        | 99.4        |
| <b>n</b>  | <b>3646</b>               | <b>3419</b> | <b>656</b>             | <b>642</b> | <b>2659</b> | <b>2566</b> |
|   | M                         | F           | M                      | F          | M           | F           |
| <b>Cap Vitamin 'A' received in last six months (6m-6yr)</b> |                           |             |                        |            |             |             |
| Yes   | 72.5                      | 74.1        | 83.1                   | 88.2       | 87.3        | 86.3        |
| No  | 27.5                      | 25.9        | 16.9                   | 11.8       | 12.7        | 13.7        |
| <b>n</b>  | <b>3646</b>               | <b>3419</b> | <b>656</b>             | <b>642</b> | <b>2659</b> | <b>2566</b> |

#### 5.4.3 Child nutrition

For the 1999 survey, information on the nutritional status of children aged 6 to 72 months was collected from a sub-sample of surveyed households. This sub-sample was drawn from the 14 villages surveyed in 1995, and included all BRAC households, an equal number of randomly selected eligible non-member households and all non-eligible households (selected for the large survey). The 1992 survey also obtained anthropometrical data from a sub-sample of the larger survey, which was comprised of 600 households from each of the four research cells. As shown in Table 5.7, a marked decline in the proportion of children with MUAC<125mm, the cut-off point for severe malnutrition, is evident in both BRAC member and non-member households. This decline in prevalence is particularly dramatic for boys. The proportion of children classified as underweight (wt/age) also seems to have decreased in both groups, but with a less obvious gendered pattern.



**Table 5.7: Nutritional status of children (6-72 months) by year of survey and BRAC membership status of the households, Matlab**

| Nutritional status | 1992<br>BRAC-eligible (%) |            |            | 1999 BRAC-eligible (%) |           |            |              |            |            |
|--------------------|---------------------------|------------|------------|------------------------|-----------|------------|--------------|------------|------------|
|                    |                           |            |            | Member                 |           |            | Non-member   |            |            |
|                    | M                         | F          | All        | M                      | F         | All        | M            | F          | All        |
| <b>MUAC (mm)</b>   |                           |            |            |                        |           |            |              |            |            |
| Mean ± sd          | 134.38±13                 |            |            | 140.80±13.93           |           |            | 139.25±14.44 |            |            |
| < 125              | 21.2                      | 25.3       | 23.2       | 7.6                    | 10.8      | 9.0        | 11.7         | 13.0       | 12.3       |
| 125 - 134.99       | 28.7                      | 34.2       | 31.4       | 19.3                   | 28.1      | 24.1       | 19.0         | 26.8       | 22.7       |
| ≥ 135              | 50.1                      | 40.4       | 45.4       | 73.1                   | 59.1      | 67.0       | 69.3         | 60.2       | 65.0       |
| <b>n</b>           | <b>477</b>                | <b>450</b> | <b>927</b> | <b>119</b>             | <b>93</b> | <b>212</b> | <b>137</b>   | <b>123</b> | <b>260</b> |

|  |            |            |            |            |            |            |            |            |            |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Underweight<br/>(Wt/Age ≤ - 2z)</b> | 74.3       | 76.4       | 75.3       | 54.3       | 52.0       | 52.6       | 50.3       | 57.5       | 53.7       |
| <b>n</b>                               | <b>455</b> | <b>419</b> | <b>874</b> | <b>132</b> | <b>102</b> | <b>234</b> | <b>149</b> | <b>134</b> | <b>283</b> |

The nutritional measures wt/ht and ht/age are presented in Table 5.8. The cut-off point of  $-2z$  is used to identify the wasted and the stunted children between the ages of 13-72 months. As can be seen, there is a decrease in the prevalence of both 'wasting' and 'stunting' since 1992, more pronounced among children from eligible non-member households.

**Table 5.8: Nutritional status of children (13-72 months) by year of survey and BRAC membership status of the households, Matlab**

| Nutritional status                 | 1992<br>BRAC-eligible (%) |            |            | 1999 BRAC-eligible (%) |           |            |            |            |            |
|------------------------------------|---------------------------|------------|------------|------------------------|-----------|------------|------------|------------|------------|
|                                    |                           |            |            | Member                 |           |            | Non-member |            |            |
|                                    | M                         | F          | All        | M                      | F         | All        | M          | F          | All        |
| <b>Wasted<br/>(Wt/Ht ≤ - 2z)</b>   | 17.5                      | 16.5       | 17.0       | 16.4                   | 14.9      | 15.7       | 9.4        | 13.3       | 11.3       |
| <b>n</b>                           | <b>400</b>                | <b>382</b> | <b>782</b> | <b>110</b>             | <b>87</b> | <b>197</b> | <b>128</b> | <b>120</b> | <b>248</b> |
| <b>Stunted<br/>(Ht/Age ≤ - 2z)</b> | 63.3                      | 63.9       | 63.6       | 48.2                   | 57.5      | 52.3       | 50.0       | 48.3       | 49.2       |
| <b>n</b>                           | <b>400</b>                | <b>382</b> | <b>782</b> | <b>110</b>             | <b>87</b> | <b>197</b> | <b>128</b> | <b>120</b> | <b>248</b> |

## 5.5: Women's health

### 5.5.1 Body Mass Index

Body Mass Index  $\{BMI=Wt(Kg)/Ht(Metre)^2\}$  is taken as a composite measure of adult nutritional status. As shown in Table 5.9, a decrease in the proportion of women with BMIs less than 17, the cut-off point for severe chronic energy deficiency, suggests a perceptible improvement in women's nutritional status. This trend is equally apparent among BRAC women members and poor non-members.

**Table 5.9: Nutritional status of currently married women (15-49 years) by year of survey and BRAC membership status of the households, Matlab**

| BMI           | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |                |
|---------------|---------------------------|------------------------|----------------|
|               |                           | Member                 | Non-member     |
| < 17.0        | 29.0                      | 22.0                   | 21.5           |
| 17.0 -18.5    | 29.3                      | 25.5                   | 27.2           |
| > 18.5        | 51.7                      | 52.5                   | 51.3           |
| Mean $\pm$ sd | 18.7 $\pm$ 2.0            | 18.9 $\pm$ 2.9         | 18.8 $\pm$ 2.6 |
| <b>n</b>      | <b>987</b>                | <b>318</b>             | <b>310</b>     |

### 5.5.2 Family planning

Table 5.10 presents data on contraceptive use among currently married non-pregnant women. A higher percentage of eligible women were currently using a contraceptive method than in 1992. This was true for both members and non-members, although the percentage of women using a method appears somewhat higher among members. The injection was the most popular contraceptive method, followed by the pill, and tubal ligation. While the use of pill and injection remained constant in 1992 and 1999, the proportion of women reporting the use of IUD and permanent methods, declined. Use of condoms is negligible, however, a perceptible increase is apparent comparing 1992 and 1999.

**Table 5.10: Contraceptive prevalence among currently married non-pregnant women by year of survey and BRAC membership status of the households, Matlab**

| Contraceptive use                | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|----------------------------------|---------------------------|------------------------|-------------|
|                                  |                           | Member                 | Non-member  |
| <b>Current contraceptive use</b> |                           |                        |             |
| Yes                              | 46.5                      | 65.8                   | 58.2        |
| No                               | 53.5                      | 34.2                   | 41.8        |
| <b>n</b>                         | <b>5591</b>               | <b>1584</b>            | <b>5653</b> |
| <b>Methods used</b>              |                           |                        |             |
| Pill                             | 30.6                      | 33.1                   | 35.6        |
| Injection                        | 41.8                      | 45.5                   | 42.2        |
| Ligation/operation               | 23.2                      | 16.2                   | 14.9        |
| IUD                              | 2.2                       | 1.7                    | 1.5         |
| Condom                           | 0.4                       | 1.6                    | 1.9         |
| Traditional methods*             | 1.8                       | 1.8                    | 4.0         |
| <b>n</b>                         | <b>2599</b>               | <b>1043</b>            | <b>3291</b> |

\*withdrawal, safe period, herbals etc.

Current family composition has changed little since 1992 (Table 5.11). A slight increase in the percentage of women with two children and a slight decrease in the proportion of women with more than two children were observed. The distribution is similar across membership categories. As for desired family composition, the trends are again similar for both members and non-members. A smaller proportion of women want two or more sons in 1999

compared to 1992, while a larger proportion desire two daughters. Coupled with the decrease in the number of women wanting no daughters, these findings suggest an improvement in attitudes towards female children.

**Table 5.11: Current and desired family composition by year of survey and BRAC membership status of the households, Matlab**

| Family composition                | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |            |
|-----------------------------------|---------------------------|------------------------|------------|
|                                   |                           | Member                 | Non-member |
| <b>Current family composition</b> |                           |                        |            |
| <i>Son(s)</i>                     |                           |                        |            |
| None                              | 20.4                      | 19.3                   | 22.2       |
| 1                                 | 29.4                      | 30.5                   | 30.8       |
| 2                                 | 25.1                      | 29.9                   | 27.8       |
| 2+                                | 25.1                      | 20.3                   | 19.2       |
| <i>Daughter(s)</i>                |                           |                        |            |
| None                              | 24.4                      | 22.1                   | 25.0       |
| 1                                 | 32.6                      | 34.5                   | 34.1       |
| 2                                 | 23.2                      | 24.9                   | 23.1       |
| 2+                                | 19.9                      | 18.5                   | 17.8       |
| <b>Desired family composition</b> |                           |                        |            |
| <i>Son(s)</i>                     |                           |                        |            |
| None                              | 16.7                      | 10.0                   | 12.7       |
| 1                                 | 34.9                      | 54.0                   | 49.7       |
| 2                                 | 46.8                      | 34.0                   | 35.8       |
| 2+                                | 1.6                       | 2.0                    | 1.8        |
| <i>Daughter(s)</i>                |                           |                        |            |
| None                              | 17.7                      | 11.1                   | 13.6       |
| 1                                 | 71.2                      | 73.3                   | 70.1       |
| 2                                 | 10.8                      | 15.4                   | 15.7       |
| 2+                                | 0.3                       | 0.2                    | 0.6        |

### 5.5.3: AIDS awareness

Table 5.12 provides data on AIDS awareness for BRAC-eligible females collected in the 1995 and 1999 surveys. There has been a dramatic increase in awareness since 1995 from 7.4 % of females who had heard of AIDS to 37% for member women and 17.8% for non-member women. Of these, however, the majority does not know how one contracts AIDS nor the preventive measures. Member women were better able to identify modes of transmission and methods of prevention than non-member women. Encouragingly, respondents in 1999 were more aware about the preventive role of condom in HIV transmission, irrespective of BRAC household status.

**Table 5.12: Percentage Distribution of 'AIDS aware' females by year of survey and BRAC membership status of the households, Matlab**

| AIDS awareness                     | 1995<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|------------------------------------|---------------------------|------------------------|-------------|
|                                    |                           | Member                 | Non-member  |
| <b>Have heard of AIDS</b>          |                           |                        |             |
| Yes                                | 7.4                       | 37.0                   | 17.8        |
| No                                 | 92.6                      | 63.0                   | 82.2        |
| <b>n</b>                           | <b>3450</b>               | <b>1726</b>            | <b>6248</b> |
| <b>How one gets AIDS</b>           |                           |                        |             |
| Unsafe sex                         | 22.6                      | 40.8                   | 28.2        |
| Using unsafe needle etc.           | 3.4                       | 3.1                    | 2.7         |
| Other(s)                           | 0.8                       | 2.9                    | 2.7         |
| Don't know                         | 73.2                      | 53.1                   | 66.4        |
| <b>n</b>                           | <b>261</b>                | <b>639</b>             | <b>1112</b> |
| <b>How to prevent AIDS</b>         |                           |                        |             |
| Use condom                         | 1.6                       | 31.0                   | 20.3        |
| Use HIV-free blood/ needle<br>etc. | 15.6                      | 3.1                    | 1.3         |
| Other(s)                           | ---                       | 2.4                    | 2.4         |
| Don't know                         | 82.8                      | 63.5                   | 76.0        |
| <b>n</b>                           | <b>250</b>                | <b>639</b>             | <b>1112</b> |

## Chapter 6: Women's lives

*Summary:* Study results provide tentative evidence of movement away from traditional attitudes regarding women's rights and status. In the period 1992 to 1999, the proportion of women who thought that sons and daughters should equally inherit their father's property more than doubled. Attitudes towards women's mobility, on the other hand, appear to have become more conservative. Little or no change in women's legal knowledge is evident: indeed, only a few women were able to identify the correct procedure for legalizing marriage or initiating divorce. Compared to 1995, a smaller proportion of women reported being the victim of physical violence in 1999, with no differences apparent between BRAC members and non-members. An increase in the personal assets of women (e.g., poultry, livestock and land), has occurred in the period 1992 to 1999, especially among BRAC members. This corresponds with a two to three fold increase in the proportion of BRAC women who reported being involved with income-earning and/or skills training activities. In 1999, handicraft production constituted the major remunerative activity, while work as domestic servants declined in importance particularly among BRAC members. Skills training is largely focused on health and poultry rearing in 1999, and is considered useful by the majority of recipients. Despite these changes, the overall involvement of women in income-earning/training activities remains less than 10% in 1999.

### 6.1 Attitudes towards women's status

Table 6.1 compares women's attitudes towards their rights and status in 1992 and 1999. Results provide tentative evidence of changes in women's views about property inheritance: although most women still maintain that the daughter should inherit less property than the son, the percentage of women who state that an equal division should occur increased from 15% in 1992 to slightly over 30% in 1999. Interestingly, a higher percentage of BRAC member women felt that the daughter should receive nothing. Favourable attitudes regarding female involvement in income earning have prevailed from 1992 to 1999, however, unexpected changes in women's views on mobility are apparent. In both groups, a larger proportion of women disapproved of women's mobility in 1999 compared to 1992.

### 6.2 Asset ownership

An increase in the proportion of women owning poultry has occurred from a baseline of 48% to 65% and 58% in member and non-member groups respectively in 1999 (Table 6.2). Although livestock is owned by only a small percentage of women (7.1% and 4.6% for members and non-members respectively), ownership has increased for BRAC women and decreased for non-BRAC women. Only a small fraction of women own land but the percentages have increased 15-fold since 1992 for both member and non-member households.

**Table 6.1: Attitude towards status of women by year of survey and BRAC membership status of the households, Matlab**

| Attitude towards women                    | 1992<br>BRAC-eligible<br>(%) | 1999 BRAC-eligible (%) |             |
|---|------------------------------|------------------------|-------------|
|   |                              | Member                 | Non-member  |
| <b>Property Inheritance</b>               |                              |                        |             |
| Daughter more                             | 0.6                          | 1.0                    | 0.6         |
| Daughter and son equal                    | 15.1                         | 32.3                   | 31.0        |
| Daughter less                             | 71.8                         | 54.1                   | 58.2        |
| Daughter gets nothing                     | 11.8                         | 11.4                   | 8.2         |
| No comment                                | 1.2                          | 1.2                    | 2.0         |
| <b>Women in Income Earning activities</b> |                              |                        |             |
| Approves                                  | 96.8                         | 98.0                   | 96.7        |
| Disapproves                               | 2.8                          | 1.6                    | 2.9         |
| Don't Know                                | 0.4                          | 0.4                    | 0.4         |
| <b>Women's mobility</b>                   |                              |                        |             |
| Approves                                  | 83.2                         | 78.4                   | 79.2        |
| Disapproves                               | 7.8                          | 16.7                   | 15.1        |
| Approves provided 'purdah' is maintained  | 8.6                          | 4.1                    | 4.4         |
| Don't know                                | 0.5                          | 0.8                    | 1.3         |
| <b>n</b>                                  | <b>6245</b>                  | <b>1726</b>            | <b>6248</b> |

**Table 6.2: Women's personal assets by year of survey and BRAC membership status of the households, Matlab**

| Asset type | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|------------|---------------------------|------------------------|-------------|
|            |                           | Member                 | Non-member  |
| Poultry    | 42.8                      | 64.6                   | 58.1        |
| Livestock  | 5.7                       | 7.1                    | 4.6         |
| Land       | 0.1                       | 1.6                    | 1.1         |
| <b>n</b>   | <b>6245</b>               | <b>1726</b>            | <b>6248</b> |

### 6.3 Loans and Savings

The proportion of women borrowers has remained constant since 1992 (Table 6.3). Member women, however, borrowed more money on average than did non-member women. The percentage of women with savings has increased exponentially since 1992, particularly among BRAC members which may be a reflection of the compulsory savings requirements instituted by BRAC. In 1999, 72% of BRAC women reported savings compared to 31% of non-BRAC women.

**Table 6.3: Women’s personal loans and savings by year of survey and BRAC membership status of the households, Matlab**

| Women’s loans and savings        | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |               |
|----------------------------------|---------------------------|------------------------|---------------|
|                                  |                           | Member                 | Non-member    |
| <b>Loan</b>                      |                           |                        |               |
| Have personal loan at present    | 4.7                       | 4.4                    | 4.6           |
| Amount in Taka (mean±sd)         | 1097.8±1457.8             | 2405.5±3839.8          | 1440.3±2897.8 |
| <b>Savings</b>                   |                           |                        |               |
| Have personal savings at present | 1.2                       | 72.1                   | 30.9          |
| Amount in Taka (mean±sd)         | 1799.0±2518.4             | 3339.3±2904.2          | 1475±4012.3   |
| <b>n</b>                         | <b>6245</b>               | <b>1726</b>            | <b>6248</b>   |

#### 6.4 Legal awareness

Analysis of data on women’s legal knowledge is inconclusive (Table 6.4). On the one hand, in 1999 a greater proportion of women responded correctly when asked how a husband can legally divorce his wife. In addition, there was a dramatic drop in the number of women who stated that divorce could be enacted by uttering the word ‘*talak*’ three times. However, the percentage of women who stated that they ‘did not know’ has doubled. That is, they know that ‘*tin talak*’ is wrong but haven’t been told what is the correct thing to do for divorce. Knowledge of marriage law, on the other hand, has not improved. A smaller proportion of respondents were able to identify the correct procedure for legalizing a marriage in 1999 than in 1992.

**Table 6.4: Women’s knowledge on family laws by year of survey and BRAC membership status of the households, Matlab**

| Knowledge of family laws        | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|---------------------------------|---------------------------|------------------------|-------------|
|                                 |                           | Member                 | Non-member  |
| <b>How to legalise divorce</b>  |                           |                        |             |
| Saying ‘ <i>tin talak</i> ’     | 61.2                      | 17.8                   | 21.4        |
| Sending letter to UC Chairman   | 6.1                       | 15.1                   | 10.0        |
| Don’t know                      | 32.3                      | 62.3                   | 66.1        |
| Others                          | 0.4                       | 4.8                    | 2.6         |
| <b>How to legalise marriage</b> |                           |                        |             |
| By marriage registration        | 4.1                       | 1.4                    | 1.3         |
| By arranging ‘ <i>kabin</i> ’   | 74.0                      | 74.2                   | 73.0        |
| Other(s)                        | 21.9                      | 19.8                   | 18.0        |
| Don’t know                      | ---                       | 4.6                    | 7.7         |
| <b>n</b>                        | <b>6245</b>               | <b>1726</b>            | <b>6248</b> |

#### 6.5 Violence

The number of women reporting incidents of violence has decreased for the listed events comparing 1995 and 1999 except for one (Table 6.5). A somewhat higher percentage of women from BRAC households were prevented from visiting their natal home in 1999 than in 1995. Non-member household’s women did not experience this increase.

**Table 6.5: Violence against women by year of survey and BRAC membership status of the households, Matlab**

| Type of violence                   | 1995 BRAC-eligible (%) |               | 1999 BRAC-eligible (%) |             |
|------------------------------------|------------------------|---------------|------------------------|-------------|
|                                    | Member                 | Non-member    | Member                 | Non-member  |
| Money taken against will           | 4.0                    | 3.0           | 2.4                    | 1.4         |
| Prevented from visiting natal home | 6.0                    | 8.0           | 9.2                    | 7.9         |
| Physically abused                  | 7.0                    | 6.0           | 5.3                    | 5.3         |
| <b>n</b>                           | <b>varies</b>          | <b>varies</b> | <b>1726</b>            | <b>6248</b> |

\*land, jewelry, livestock etc.

## 6.6 Employment and skill training

Although only a small percentage of women are involved in income-earning activities in 1999, this represents a two-fold increase since the 1992 survey for BRAC members (Table 6.6). A lesser increase is noted among non-members. Handicraft production represents the major income-generating activity reported by women in both member and non-member groups in 1999, and largely replaces domestic/housemaid work particularly among women from BRAC households.

As with income earning, only a small fraction of women receive skill development training however, a far greater proportion of women from BRAC households appear to benefit (Table 6.7). Indeed, the 1999 survey results indicate a three-fold increase in the proportion of BRAC women who reported having received training compared to 1992. Substantial changes in the type of training received were noted in 1999 compared to 1992. There was a sharp increase in health-related training with simultaneous drop in technical (e.g., tailoring, teaching, cottage industries, etc.) training. Consistent with BRAC development programmes, a large proportion of BRAC women received training on poultry rearing. While most women who received training felt that it was beneficial, this was especially evident among women of BRAC households.



**Table 6.6: Women's involvement in income-earning activities by year of survey and BRAC membership status of the households, Matlab**

| Income-earning activities                    | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|--|---------------------------|------------------------|-------------|
|  |                           | Member                 | Non-member  |
| <b>Involved in income-earning activities</b> | 3.7                       | 9.3                    | 4.9         |
| <b>n</b>                                     | <b>6245</b>               | <b>1726</b>            | <b>6248</b> |
| <b>Type of work involved:</b>                |                           |                        |             |
| Agri-labour                                  | 8.2                       | 5.0                    | 6.2         |
| Earth work                                   | 6.1                       | 5.6                    | 1.3         |
| Handicrafts                                  | 41.6                      | 64.6                   | 60.3        |
| House-maid                                   | 29.9                      | 4.3                    | 11.1        |
| Service                                      | 5.2                       | 3.7                    | 7.5         |
| Other(s)                                     | 9.0                       | 16.8                   | 13.5        |
| <b>n</b>                                     | <b>231</b>                | <b>161</b>             | <b>305</b>  |

**Table 6.7: Women's involvement in skills training by year of survey and BRAC membership status of the households, Matlab**

| Involvement in skills training         | 1992<br>BRAC-eligible (%) | 1999 BRAC-eligible (%) |             |
|--|---------------------------|------------------------|-------------|
|  |                           | Member                 | Non-member  |
| <b>Received skill-training</b>         | 2.0                       | 6.4                    | 2.0         |
| <b>n</b>                               | <b>6245</b>               | <b>1726</b>            | <b>6248</b> |
| <b>Type of training received</b>       |                           |                        |             |
| Health related                         | 4.1                       | 33.3                   | 34.1        |
| Poultry                                | 2.1                       | 16.2                   | 5.2         |
| Technical                              | 81.1                      | 43.2                   | 54.3        |
| Defense (Ansar training)               | 3.3                       | ---                    | 0.6         |
| Other(s)                               | 8.0                       | 7.2                    | 5.8         |
| <b>n</b>                               | <b>122</b>                | <b>111</b>             | <b>173</b>  |
| <b>Whether benefited from training</b> |                           |                        |             |
| Yes                                    | 71.3                      | 84.7                   | 80.9        |
| No                                     | 28.7                      | 15.3                   | 19.1        |
| <b>n</b>                               | <b>122</b>                | <b>111</b>             | <b>173</b>  |

## Chapter 7: Basic education of children

*Summary: The most important change occurring in the field of education was in the rate of enrolment, which increased sharply from 68% in 1992 to over 90% in 1999. In both BRAC member and non-member groups, girls enjoy higher enrolment than do boys, indicative of government and NGO success in promoting female education. Results of basic competency tests suggest equally dramatic improvements in levels of achievement since the baseline survey, particularly among girls and children in BRAC-member households. In fact, girls outperformed boys in reading, writing and life skills. Boys performed better than girls in the numeracy section of the test.*

### 7.1 Introduction

The major objectives of the BRAC Education Programme (BEP) are to provide basic education, increase school enrolment and retention rates, and eliminate gender disparities. Basic education refers to 'education intended to develop basic learning skills (reading, writing and numeracy i.e., "3 R's") as well as some basic life skills necessary for the children to survive, to improve the quality of their lives and to continue learning'. To evaluate the degree to which these objectives are being met, assessment of basic education (ABC) was conducted for a sub-sample of children in the 1999 survey. Measures of interest include reading, writing, and arithmetic skills as well as knowledge of basic life skills. This chapter presents some key findings from the 1999 survey and compares it with basic education surveys done in 1992.

### 7.2 Methodology

A basic competency test was administered at home to children between the ages of 11 and 15 by four trained examiners. Reasonable assistance was provided to children if certain portions of the test required clarification. Analysis of internal consistency (Cronbach's Alpha) indicates that the test was highly reliable at 0.96. Items included in the instrument have been refined and validated in previous surveys, and were pilot-tested prior to their inclusion in the current study. In addition, expert opinion was solicited.

### 7.3 Findings

Table 7.1 provides sample distributions by age, sex, membership status and year of survey. These data indicate that greater proportions of both member and non-member children fall in the 13-15 age group in 1999 versus 1992.

**Table 7.1: Distribution of children by age, sex and BRAC membership status of households in 1992 and 1999**

| Age group   | 1992            |            |            | 1999 BRAC-eligible % |            |            |            |            |            |
|-------------|-----------------|------------|------------|----------------------|------------|------------|------------|------------|------------|
|             | BRAC eligible % |            |            | Member               |            |            | Non-member |            |            |
|             | Boy             | Girl       | All        | Boy                  | Girl       | All        | Boy        | Girl       | All        |
| 11-12 years | 61.9            | 54.5       | 58.6       | 39.6                 | 42.6       | 41.3       | 53.7       | 45.5       | 49.3       |
| 13-15 years | 38.1            | 45.2       | 41.4       | 60.4                 | 57.1       | 58.9       | 46.3       | 54.5       | 50.7       |
| <b>n</b>    | <b>215</b>      | <b>188</b> | <b>403</b> | <b>101</b>           | <b>105</b> | <b>206</b> | <b>257</b> | <b>303</b> | <b>560</b> |

Table 7.2 presents the enrolment of children by BRAC membership status and sex. Enrolment has sharply increased from 68% in 1992 to more than 92% in 1999 in the study area irrespective of BRAC membership status or sex of children. This increase is particularly dramatic among children of BRAC members due to the provision of low cost non-formal school that targets “drop outs” and children who have never been to school. Girls enjoy higher enrolment than do boys, indicative of government and NGO success in promoting female education. BRAC schools, for example, require that girls comprise at least 60% of total school enrolment.

**Table 7.2: Percentage distribution of children by enrolment status, sex and BRAC membership status of households in 1992 and 1999**

| Enrolment                | 1992            |            |            | 1999 BRAC eligible % |            |            |            |            |            |
|--------------------------|-----------------|------------|------------|----------------------|------------|------------|------------|------------|------------|
|                          | BRAC eligible % |            |            | Member               |            |            | Non-member |            |            |
|                          | Boy             | Girl       | All        | Boy                  | Girl       | All        | Boy        | Girl       | All        |
| Enrolled                 | 69.8            | 66.5       | 68.2       | 95.0                 | 97.1       | 96.1       | 88.7       | 91.1       | 90.0       |
| Not enrolled/<br>dropout | 30.2            | 33.5       | 31.8       | 5.0                  | 2.9        | 3.9        | 11.3       | 9.9        | 10.0       |
| <b>n</b>                 | <b>215</b>      | <b>188</b> | <b>403</b> | <b>101</b>           | <b>105</b> | <b>206</b> | <b>257</b> | <b>303</b> | <b>560</b> |

Table 7.3 provides data on the proportion of children satisfying basic education (three ‘R’s plus life-skills) criteria. Distributions are broken down by age, sex, membership status, and year of survey. Overall, only slight improvements in the percentage of children meeting the basic education criteria are apparent. The sex-specific distributions, however, indicate that girls in both member and non-member groups have made great strides: among 11-12 years olds, for example, the percentage of girls meeting basic education criteria increased from 5.8% in 1992 to 13.3% and 10.9% for members and non-members, respectively in 1999. The apparent decline in the proportion of boys meeting basic education criteria in the 11-12 year age group, and among 13-15 year old BRAC groups, is troublesome and warrants further investigation.

**Table 7.3: Distribution of children who satisfied Basic education criteria by age, sex and BRAC membership status of households in 1992 and 1999**

| Age group | 1992            |            |            | 1999 BRAC eligible % |            |            |            |            |            |
|-----------|-----------------|------------|------------|----------------------|------------|------------|------------|------------|------------|
|           | BRAC eligible % |            |            | Member               |            |            | Non-member |            |            |
|           | Boy             | Girl       | All        | Boy                  | Girl       | All        | Boy        | Girl       | All        |
| 11-12     | 12.0            | 5.8        | 9.3        | 7.5                  | 13.3       | 10.6       | 7.2        | 10.9       | 9.1        |
| 13-15     | 19.5            | 14.1       | 16.8       | 14.8                 | 20.0       | 17.4       | 27.7       | 16.4       | 21.1       |
| <b>n</b>  | <b>215</b>      | <b>188</b> | <b>403</b> | <b>101</b>           | <b>105</b> | <b>206</b> | <b>257</b> | <b>303</b> | <b>560</b> |

Performance of children meeting specific skills criteria is presented in Table 7.4. In general, children from both member and non-member households have shown considerable improvement since 1992. Information on life skills, however, indicates that children performed better in 1992 than 1999 although differences in the measurement instrument may explain these decreases<sup>5</sup>. In 1999, girls outperformed boys in all skill areas except numeracy. In addition, children from BRAC member households performed better than children from non-member households in writing, numeracy, and life skills.

**Table 7.4: Percentage distribution of children satisfying the different skill criteria by sex and BRAC membership status of households in 1992 and 1999**

| Different skills | 1992            |            |            | 1999 BRAC eligible % |            |            |            |            |            |
|------------------|-----------------|------------|------------|----------------------|------------|------------|------------|------------|------------|
|                  | BRAC eligible % |            |            | Member               |            |            | Non-member |            |            |
|                  | Boy             | Girl       | All        | Boy                  | Girl       | All        | Boy        | Girl       | All        |
| Life skills      | 42.8            | 48.6       | 45.7       | 38.6                 | 45.7       | 42.2       | 30.0       | 31.4       | 30.7       |
| Reading          | 32.6            | 25.0       | 29.0       | 28.7                 | 36.2       | 32.5       | 31.9       | 33.0       | 32.5       |
| Writing          | 22.8            | 14.9       | 19.1       | 37.6                 | 50.5       | 44.2       | 32.3       | 34.7       | 33.6       |
| Numeracy         | 84.2            | 64.4       | 74.9       | 87.1                 | 75.2       | 81.1       | 87.9       | 70.6       | 78.6       |
| <b>n</b>         | <b>215</b>      | <b>188</b> | <b>403</b> | <b>101</b>           | <b>105</b> | <b>206</b> | <b>257</b> | <b>303</b> | <b>560</b> |

Table 7.5 presents the information on literacy rates of children by sex and BRAC membership status of the households. Literacy has increased from 15% at baseline to 23% and 25% for children in member and non-member households, respectively, in 1999. In contrast to 1992, where boys enjoyed higher rates of literacy, a larger proportion of girls met literacy criteria in 1999 than did their male counterparts.

**Table 7.5: Percentage of children satisfying 'literacy' ('basic education' minus 'life skills') criteria of children by sex and BRAC membership status of households in 1992 and 1999**

| 1992            |            |            | 1999 BRAC-eligible % |            |            |            |            |            |
|-----------------|------------|------------|----------------------|------------|------------|------------|------------|------------|
| BRAC eligible % |            |            | Member               |            |            | Non-member |            |            |
| Boy             | Girl       | All        | Boy                  | Girl       | All        | Boy        | Girl       | All        |
| 19.1            | 10.6       | 15.1       | 20.8                 | 26.7       | 23.8       | 24.1       | 25.1       | 24.6       |
| <b>215</b>      | <b>188</b> | <b>403</b> | <b>101</b>           | <b>105</b> | <b>206</b> | <b>257</b> | <b>303</b> | <b>560</b> |

<sup>5</sup> An item was dropped, another item was added and the question on attitude was rephrased in 1999. In individual analysis of the test items, it was found that the performance dropped sharply for the 'gender attitude' item (see table 7.7).

Table 7.6 presents facility values of each item tested, by sex and BRAC membership status of the households. It is an important exercise to find out the strength and weakness of the children in different items. It shows that performance in some of the items had similar trend in both the tests, for instance, easy treatment for diarrhoeal disease and preference of drinking water. In addition, it shows that facility values for some of the items decreased drastically in the follow-up test. However, facility values of few items increased as well, especially in the mental arithmetic. Also, facility values of some important items in the life skill section were quite low e.g. benefit of child immunisation (26.4%) and prevention knowledge of night blindness (28.4%).

Table 7.6: Facility values of different items in 1992 and 1999 tests by sex and BRAC membership status of households.

| Items   | 1992             |      |      | 1999 BRAC-eligible % |      |      |            |      |      |
|---|------------------|------|------|----------------------|------|------|------------|------|------|
|   | BRAC-eligible %  |      |      | Member               |      |      | Non-member |      |      |
|   | Boy              | Girl | All  | Boy                  | Girl | All  | Boy        | Girl | All  |
| <b>Life skills</b>  |                  |      |      |                      |      |      |            |      |      |
| What is a good and easy treatment for diarrhoea?                  | 73.5             | 72.9 | 73.2 | 89.1                 | 91.4 | 90.3 | 84.0       | 90.1 | 87.3 |
| What food helps prevent night blindness?                          | 17.2             | 16.5 | 16.9 | 46.5                 | 42.9 | 44.7 | 35.4       | 40.6 | 38.2 |
| How can water be made drinkable?                                  | 71.2             | 70.2 | 70.7 | 80.2                 | 79.0 | 79.6 | 70.0       | 71.6 | 70.9 |
| What water should we drink?                                       | 99.1             | 98.9 | 99.0 | <b>Not asked</b>     |      |      |            |      |      |
| Where should one defecate?  | 57.7             | 53.7 | 55.8 | 73.3                 | 70.5 | 71.8 | 54.1       | 4.5  | 51.6 |
| What benefit comes from vaccination for child?                    | 31.2             | 31.4 | 31.3 | 18.8                 | 39.0 | 29.1 | 33.9       | 38.3 | 36.3 |
| How many brothers & sisters should there be in family?            | 36.3             | 50.0 | 42.7 | 45.5                 | 61.9 | 53.9 | 44.0       | 53.8 | 49.3 |
| Gender issue (rephrased in 1999)                                  | 97.7             | 98.4 | 98.0 | 36.6                 | 53.3 | 46.1 | 27.6       | 38.0 | 33.2 |
| Do you know what prevents poultry and livestock from falling ill? | 60.5             | 58.5 | 59.6 | 38.6                 | 53.3 | 46.1 | 27.6       | 38.0 | 33.2 |
| If someone get a high fever what should one do at first.          | 62.3             | 77.1 | 69.2 | 79.2                 | 82.9 | 81.1 | 64.2       | 71.3 | 68.0 |
| Do you know the name of the president of Bangladesh?              | <b>Not asked</b> |      |      | 5.0                  | 4.8  | 4.9  | 8.9        | 3.0  | 5.7  |
| Do you know the name of prime minister of Bangladesh?             | <b>Not asked</b> |      |      | 74.3                 | 62.9 | 68.4 | 69.6       | 57.8 | 63.2 |
| <b>Reading skill</b>  |                  |      |      |                      |      |      |            |      |      |
| Mother  | 65.6             | 60.1 | 63.0 | 87.1                 | 91.4 | 89.3 | 79.8       | 84.5 | 82.3 |
| Marriage  | 52.6             | 45.7 | 49.4 | -                    | -    | -    | -          | -    | -    |
| Pond  | 54.4             | 45.7 | 50.4 | 79.2                 | 82.9 | 81.1 | 62.3       | 66.7 | 64.6 |
| Rainy season  | 45.6             | 31.9 | 39.2 | -                    | -    | -    | -          | -    | -    |
| Freedom   | 38.1             | 25.5 | 32.3 | 62.4                 | 60.0 | 61.2 | 43.6       | 44.2 | 43.9 |
| Joy   | 50.2             | 36.2 | 43.7 | -                    | -    | -    | -          | -    | -    |
| Saving  | 34.4             | 20.7 | 28.0 | 50.5                 | 57.1 | 53.9 | 34.2       | 34.0 | 34.1 |
| Co-operation  | 42.3             | 31.4 | 37.2 | 61.4                 | 65.7 | 63.6 | 47.5       | 48.5 | 48.0 |
| Five trees fell down in the storm.                                | 45.6             | 35.1 | 40.7 | 57.4                 | 58.1 | 57.8 | 42.8       | 44.2 | 43.6 |
| Let us go to school.  | 32.6             | 25.0 | 29.0 | -                    | -    | -    | -          | -    | -    |
| <b>Reading Comprehension</b>                                      |                  |      |      |                      |      |      |            |      |      |
| What does Gafur Miah cultivate in his land?                       | 46.0             | 35.6 | 41.2 | 69.3                 | 73.3 | 71.4 | 49.4       | 53.5 | 51.6 |
| Where does he save money?   | 44.2             | 35.1 | 40.0 | 61.4                 | 64.8 | 63.1 | 44.7       | 48.4 | 47.0 |
| How many members are there in his family?                         | 31.2             | 23.9 | 27.8 | 22.8                 | 33.3 | 28.2 | 24.9       | 27.7 | 26.4 |
| Why small family is happy family                                  | 16.7             | 13.3 | 15.1 | 14.9                 | 14.3 | 14.6 | 23.7       | 20.5 | 22.0 |
| <b>Writing skill</b>  |                  |      |      |                      |      |      |            |      |      |
| Name  | 69.8             | 63.3 | 66.7 | 93.1                 | 95.2 | 94.2 | 82.5       | 85.8 | 84.3 |
| Village Name  | 48.8             | 35.1 | 42.4 | 67.3                 | 65.7 | 66.5 | 49.0       | 55.4 | 52.5 |
| Water   | 52.1             | 45.7 | 49.1 | 70.3                 | 75.2 | 72.8 | 54.1       | 61.4 | 58.0 |
| Education   | 34.0             | 21.3 | 28.0 | 52.5                 | 60.0 | 56.3 | 38.1       | 40.3 | 39.3 |
| Bangladesh  | 47.0             | 37.2 | 42.4 | 74.3                 | 75.2 | 74.8 | 51.0       | 59.4 | 55.5 |
| Writing a sentence  | 38.6             | 25.0 | 32.3 | 43.6                 | 52.4 | 48.1 | 30.7       | 36.6 | 33.9 |
| Salutation  | 23.7             | 16.5 | 20.3 | 44.6                 | 51.4 | 48.1 | 35.0       | 38.3 | 36.8 |
| Message   | 22.8             | 14.9 | 19.1 | 37.6                 | 50.5 | 44.2 | 32.3       | 34.7 | 33.6 |
| Finish  | 20.0             | 13.8 | 17.1 | 17.8                 | 26.7 | 22.3 | 23.3       | 29.0 | 26.4 |
| <b>Numeracy Skill</b>   |                  |      |      |                      |      |      |            |      |      |
| Count number (40-50)  | 92.6             | 69.1 | 81.6 | 91.1                 | 87.6 | 89.3 | 86.4       | 78.5 | 82.1 |
| Number recognition '3'  | 86.5             | 77.1 | 82.1 | 97.0                 | 98.1 | 97.6 | 94.6       | 92.4 | 93.4 |
| Number recognition '49'   | 50.2             | 30.3 | 40.9 | 72.3                 | 63.8 | 68.0 | 54.1       | 45.9 | 49.6 |
| Number recognition '500'  | 65.1             | 47.3 | 56.8 | 83.2                 | 77.1 | 80.1 | 65.0       | 59.4 | 62.0 |
| Writing number '5'  | 74.4             | 69.7 | 72.2 | 93.1                 | 94.3 | 93.7 | 86.0       | 86.1 | 86.1 |
| Writing number '67'   | 47.9             | 30.9 | 40.0 | 66.3                 | 61.9 | 64.1 | 52.9       | 48.2 | 50.4 |
| Writing number '208'  | 42.8             | 28.2 | 36.0 | 70.3                 | 54.3 | 62.1 | 51.4       | 42.2 | 46.4 |
| Addition  | 55.3             | 37.2 | 46.9 | 64.4                 | 64.8 | 64.6 | 57.2       | 49.8 | 53.2 |
| Subtraction   | 32.1             | 13.8 | 23.6 | 40.6                 | 33.3 | 36.9 | 27.6       | 22.8 | 25.0 |
| Mental Addition   | 94.0             | 78.7 | 86.8 | 86.1                 | 75.2 | 80.6 | 83.3       | 75.2 | 78.9 |
| Subtraction   | 92.6             | 79.3 | 86.4 | 89.1                 | 78.1 | 83.5 | 93.0       | 82.5 | 87.3 |
| Multiplication  | 86.5             | 68.6 | 78.2 | 89.1                 | 81.9 | 85.4 | 86.8       | 72.3 | 78.9 |
| Division  | 40.5             | 20.2 | 31.0 | 86.1                 | 73.3 | 79.6 | 89.1       | 71.0 | 79.3 |

N.B: 'Facility values' refer to percentage of children who correctly answered each item

## Chapter 8: Summary, policy implications and references

Given the descriptive nature of the data presented in this report, it is presumptuous to draw conclusions about the impact of BRAC development activities on population health and well-being. Nevertheless, some interesting trends are apparent that warrant further analytic and/or policy-related attention. These observations, however, must be qualified due to issues of selectivity bias i.e., the concern that differences between BRAC members and poor non-members are not solely the result of programme effects but due to unmeasured characteristics that make the two groups fundamentally distinct on baseline. This issue has been addressed conceptually and statistically in previous studies (12, 13, 14), with the authors concluding that baseline differences do not adequately explain observed variations in outcomes. The fact that the same households were surveyed during 1992 and 1999, also provides some measure of internal control against individual and village level confounders. Nevertheless in future secondary analyses, further statistical and other appropriate methods for dealing with selectivity and other biases will be employed.

Another important fact to consider before comparisons can be made between 1992 and 1999 data is the catastrophic flood in the second half of 1998, which surpassed all past recorded experiences (15). Almost two-thirds of the country was under water for an average of eight to nine weeks. Millions lost their productive assets and livelihoods, and like any other natural disaster, the poorer section of the society suffered the most. Matlab, one of the worst affected districts took full brunt of the disaster. The gains of development programme in improving the lot of poor people came under threat. BRAC took a very pro-active and effective role and its massive relief and post-flood rehabilitation operation helped in preventing the poor from sliding into abject poverty (16). By the time this survey was conducted, the programme participants were well on their way to recovery from the socioeconomic effects of the disaster. However, the flood had left its marks in different areas of the lives of the poor such as the nutritional status of women and children, and their occupational profile.

In this Chapter, we will try to summarize the findings and related policy implications under two broad headings: changes at the household level and changes at the individual level. The latter will mainly deal with some selected aspects of the lives of women and children. This summary will be accompanied by a discussion on policy implications where relevant.

### *Changes at the household level*

One of the most striking trends in the period 1992 and 1999 are changes in the age structure of the study sample. Although the population is still quite young, the percentage under age 5 has decreased since baseline, suggestive of lower fertility. The increased proportion of the female population over 65 is also encouraging and may be indicative of improvements in women's status. At the same time, evidence of population aging calls for creative programming by government and NGOs to address the unique challenges faced by the elderly such as higher rates

of morbidity, decreased ability to earn an income, and social isolation. Of particular interest to BRAC is the large proportion of non-Muslim households represented in its membership compared to their baseline distribution in the population - a shift that indicates BRAC's success in expanding programme participation to this economically disadvantaged subpopulation.

Data on educational enrolment and performance are encouraging, particularly in terms of equity for girls. Not only is there a sharp drop in the proportion of illiterates among the study population in 1999 compared to 1992, the average number of years of schooling reported among children aged 11 to 15 increased markedly. School enrolment also rose dramatically, particularly among girls and children from BRAC member households.

In general, relative improvements in educational performance are apparent since baseline, regardless of membership status. In 1999, girls outperformed boys in all skill areas except numeracy. In addition, children from BRAC member households performed better than children from non-member households in writing, numeracy, and life skills. These promising figures notwithstanding, there is cause for concern. First, unlike their female counterparts, male reading skills have deteriorated in the period 1992 to 1999. Second, although the proportion of children meeting basic education criteria requirements has risen, the absolute proportions remain very low. This points to the need of reviewing BRAC Education Programme curriculum and pedagogy. Of particular importance are measures that address the gap in performance between girls and boys, particularly in the areas of numeracy and reading.

The material well-being of the BRAC households continued to improve as shown by the consistently greater asset base of these households in 1999 despite the devastating flood of the previous year. Also, these households gained greater food security and economic solvency than their counterparts. These apparent improvements are, however, concomitant with an increase in the proportion of households that classify themselves as landless, a traditional indicator of poverty that may be increasingly redundant in the context of widespread land scarcity. Analysis of employment trends over the past seven years suggests a shift in the occupational structure from self-employment (agricultural and non-agricultural) to wage-labour among both BRAC member and non-member households. Given that BRAC's credit-based development interventions aim to promote self-employment in the non-agricultural sector, these trends need to be further analyzed. Specifically, studies are called for that investigate the extent to which non-profitability/failure of self-employment activities may explain the greater reliance on wage labour. Also, a rise in the proportion of the destitute is noted in the survey which may have been due to the after-effects of 1998 flood causing great damage to livelihoods, especially self-employed activities. For the growing destitute population, there may be a need to consider programmes that support wage-employment, as well as food and other subsidies.

Behaviour related to water and sanitation has improved since 1992, with larger proportions reporting use of sanitary latrines and water from safe sources. Surprisingly, a slightly larger percentage of non-members reported use of sanitary latrines than BRAC members indicating the need for improvement in facilitating change in



behaviour practices. Results on the prevalence of self-reported morbidity indicate no differences between BRAC members and poor non-member households. While the overall proportion of members and non-members reporting illness is similar between 1995 and 1999 surveys, rates increased among BRAC member households and decreased among non-members.

The analysis revealed interesting changes in the health-seeking behaviour of the study population. To start with, a shift is noted during this time in treatment-seeking from traditional medicine to 'modern' medicine (i.e., allopathic medicine, qualified or not), especially among BRAC households. However, the use of allopathic medicine from various health-care providers taken as a whole decreased in 1999 with a concomitant sharp increase in self-care/self-treatment for managing illness episodes. A closure look shows that this decrease mainly affected qualified and semi-qualified allopathic care while care-seeking from unqualified allopaths continued to increase during the study period, an issue of real concern. To note, for self-treatment also, common over-the-counter allopathic medicine is extensively used beside others. Increase in self-care/self-treatment for managing illness episodes may be a manifestation of health empowerment of the community, which is laudable if it is based on informed decision making.

The dramatic rise in self-care/self-treatment in the findings warrants attention. A number of underlying situations can be postulated. The catastrophic flood which struck Bangladesh in the second half of 1998 had left its marks on the lives and livelihoods of the poor and the resulting decrease in the capacity for health expenditure may have tempted them to rely on self-management of illness. Moreover, the rising cost of allopathic treatment, and the residual use of medicine for common ailments dumped substantially in the rural site during the post-flood rehabilitation programme by different agencies, might have contributed to this situation. Another possible explanation may lie in the fact that as poor people become economically better-off, and exposed to functional education and preventive health training, their capacity to recognize and diagnose common illnesses and pursue appropriate treatment actions without consulting health practitioners, increase. Indeed, a similar tendency is noted in Bombay, India, whereby people of better socioeconomic status tend to engage in self-diagnosis and self-prescription to a greater extent than those of lower socioeconomic status (17). However, further in-depth study is required to understand this emerging phenomenon in greater detail.

#### *Changes at the individual level*

In this study, changes at the individual level were mainly seen for the currently married women between the age of 15 and 49 years. Also, a sub-sample was investigated to get an idea about women's' and children's nutritional status.

Study results provide tentative evidence of movement away from traditional attitudes regarding women's rights and status. For instance, the proportion of women who approve of equitable property inheritance between sons and daughters more than doubled between 1992 and 1999. Rates of violence against women also appear to have declined, especially among BRAC households where an initial backlash effect has been hypothesized. On the other

hand, compared to 1992, the proportion of women who disapprove of women's mobility appears to have grown, an attitude that is particularly prevalent among BRAC members. With regard to legal knowledge, the data provide mixed results. In 1999, a notable proportion of women could identify legal methods of divorce but only a small proportion were able to identify correct procedure for legalizing marriage or the legal age of marriage for men or women. Future activities should focus on the prevention of violence against women, and work that supports laws protecting the legal rights of women, both of which require greater involvement of husbands and other male family members to succeed.

Among women, asset ownership and personal savings have increased considerably since 1992. This trend is exaggerated in the BRAC group where women reported average savings double that of their non-member counterparts. Although the proportion of women engaging in income earning and skills training activities doubled during the study period, overall involvement of women in such activities is less than 10% in 1999. Given the myriad beneficial effects of independent income-earning for women's status and the health and well-being of household members, further creative efforts to raise the economic involvement of women are clearly necessary.

Information on the nutritional status of adult women and children was collected from a sub-sample of surveyed households. While the nutritional status of adult women appears not to have changed during the study period, based on these preliminary analyses, the nutritional experience of children aged 6 years and under remains inconclusive. A decline in the proportion of children with middle upper arm circumference less than 125 mm (the cut-off for severe malnutrition) is noted comparing 1992 and 1999 data, especially among BRAC members. On the other hand, though all the indicators of underweight, wasting and stunting showed improvement from 1992 to 1999 for both member and non-member groups, the decrease was more pronounced in case of poor non-member households compared to children of BRAC households. Further analysis is required to help explain these seemingly contradictory findings.

Contraceptive prevalence has increased since 1992, with higher rates evident among BRAC members. Among women surveyed, hormonal injection is the most popular contraceptive method. Current family composition has remained relatively stable since baseline. Awareness of AIDS increased sharply among BRAC women between 1995 and 1999, as did awareness of the preventive role of condoms. Only a low percentage of women, however, reported use of condoms.

### **Policy Implications**

- It is clear from the findings that the population of the study area is ageing. There is, and there will be, growing numbers of elderly population among BRAC households. Elderly people, including former programme participants, become vulnerable due to sudden drop in income and socioeconomic opportunities, thereby increasing the probability of economic deprivation and social isolation. This is

compounded by higher burden of ill-health and disability among them. BRAC should start thinking about this growing sector of elderly population.

- It's high time that BRAC Education Programme gives more attention to the quality of education. Also, measures need be undertaken to reduce the gap in performance between girls and boys, especially in numeric skills.
- Findings point to a change in primary occupation from self-employment to wage-labour in the study area, though BRAC's credit-based development interventions tend to promote self-employment in the non-agricultural sector. Whether this is a reflection of the non-profitability/failures of the self-employment activities or the consequences of the destruction of livelihoods during the devastating flood of '98, needs serious re-thinking on the part of the programme.
- An alarming increase in the destitute population, BRAC households notwithstanding, urgently calls for the need of expanding wage-employment for this section of the population, supplemented by food and other subsidies as and when required.
- The encouraging trends in sanitation behaviour need to be consolidated and expanded further because it is still far short of expectation. Also, sharp increase in self-management of illnesses and decrease in preferred use of qualified and semi-qualified allopaths raises the question of cost of health-care for the poor. Care-seeking from unqualified allopaths by a substantial proportion of the population is an issue of real concern and calls for innovative interventions to train these people on rational and ethical use of allopathic medicine.
- BRAC's interventions have made substantial improvement in the quality of women's lives. To consolidate the gains, more work is needed in the areas of legal awareness related to marriage and family laws, and prevention of all kinds of violence against women. This may necessitate the involvement of husbands and other male members of the family in the existing interventions.
- Women's involvement in income-earning activities is still very small. Given the beneficial effects on women and her family, efforts should be made to increase it. Also, before giving skill training, the programme should plan ahead how this training is going to be used to contain wastage of time and resources.

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16. BRAC. Flood relief and rehabilitation project: July 1998 - July 1999 (Phase ending report). Dhaka: BRAC, 1999.
17. Kamat VR, Nichter M. Pharmacies, self-medication and pharmaceutical marketing in Bombay, India. *Soc Sci Med* 1998;47(6):779-94.

## Part III: Annexure

### Annex 1

#### Publications from BRAC-ICDDR,B Joint Research Project

(Excepting Working Papers listed in Annex 2)

##### A. Monographs:

1. Ahmed SM et al. Socioeconomic Development and Health: Final Report of the Baseline Survey in Matlab, 1992. BRAC, Dhaka, 1994.
2. Chowdhury MRK (editor). Proceedings of a workshop on research framework. BRAC, Dhaka, 1994.
3. BRAC-ICDDR, B Research Team. Five Reports on 1<sup>st</sup> Round 1995 Survey: health, household economy, fertility and reproductive health, women's lives, and nutrition, 1996 (unpublished).

##### B. Articles in Journals:

1. Mohsin M et al. Gender preferences and practices of contraceptives by selected socio-demographic characteristics in rural Bangladesh. *Asian Profile* 1995;23(6): 489-501.
2. Khan SR. et al. Women's education and employment: Matlab experience. *Asia-Pacific Population Journal* 1996; 11(1): 45-58.
3. Mohsin M et al. Influence of socioeconomic factors on basic competencies of children in Bangladesh. *Journal of Biosocial Science* 1996;28: 15-24.
4. Ahmed SM et al. Health-seeking behaviour: influencing factors in a medically pluralistic society: *Bangladesh Medical Journal* 1997;26(3&4):42-4.
5. Ahmed SM et al. Income-earning women from rural Bangladesh: changes in attitude and knowledge. *Empowerment* 1997;4:1-12.
6. Ahmed SM et al. Chronic Energy Deficiency in women from rural Bangladesh: some socioeconomic determinants. *Journal of Biosocial Science* 1998;30:349-58.
7. Ahmed SM et al. Expanded programme on immunization and nutrition of under-five children: experiences from Matlab, Bangladesh. *Journal of Preventive & Social Medicine* 1998;17(1):1-9.
8. Zaman H. Can Mis-targeting be justified? Insights from BRAC's Micro-credit Programme. *IDS Bulletin* 1998;29(4):59-65.
9. Ahmed SM et al. Gender, socio-economic development and health seeking behaviour in Bangladesh. *Social Science and Medicine* 2000; 51:361-371.
10. Ahmed SM et al. Microcredit and emotional well-being: the case of poor rural women from Matlab, Bangladesh. *World Development* 2001 (in press).
11. Cash K, Khan SI, Nasreen H, Bhuiya A, Chowdhury S, Chowdhury AMR. Telling them their own stories: legitimizing sexual and reproductive health education in rural Bangladesh. *Sex Education* 2001; 1: 43-57.

12. Cash K, Nasreen H, Khan SI, Bhuiya A, Chowdhury AMR, Chowdhury S. Sexual Health for rural Bangladeshi youth. *Sexual Health Exchange* 2001 (in press).

#### C: Book Chapter(s)/ Brief Reports etc.

1. Chowdhury AMR., Bhuiya A. Do poverty alleviation programmes reduce inequalities in health? The Bangladesh experience. In: *Leon and Walt (eds.). Poverty, inequality and health.* Oxford: Oxford University Press, 2000: 312-332.
2. Bhuiya A., Chowdhury M, Ahmed F and Adams AM. Bangladesh: An intervention study of factors underlying increasing equity in child survival. Pp 227-239. In: Evans T. et al. (eds.). *Challenging Inequities In Health: From Ethics to Action.* New York: Oxford University Press, 2001: 227-239.
3. Zaman H. Micro-credit programmes: who participates and what does it matter? In: *G Wood and I Sharif (eds). Who Needs Credit? Poverty and Finance in Bangladesh.* Dhaka: University Press Ltd, 1996: 231-244.
4. PROWID. Integrating sexual and reproductive health education into service delivery: a programme for rural communities in Bangladesh. *PROWID Report-in-Brief.* Washington DC.: International Center for Research on Women and The Center for Development and Population activities, 1999.

#### D: Dissertations/thesis

1. Shutika: a reproductive illness in Bangladesh---Cultural interpretations and coping mechanisms of rural women, 1998 (MS dissertation) by Amina Mahbub. Submitted for Masters in Medical Anthropology, University of Amsterdam, Holland.
2. Who benefits and to what extent? an evaluation of BRAC's micro-credit programme, 1998 (PhD Thesis) by Hassan Zaman. Submitted for PhD in Economics, University of Sussex. UK.
3. Contribution of BRAC's programme in achieving Basic Competency, Literacy and increasing the Enrolment of children in Matlab, Bangladesh, 2000 (MS dissertation) by AKM Masud Rana. Submitted for Masters in Education, University of Manchester, UK.
4. Reproductive tract infections and sexually transmitted diseases in a rural area of Bangladesh: insights for action from research, 2001 (MPH Dissertation). By Hashima-E-Nasreen. Submitted for Masters in Public Health, Umea University, Sweden.

#### E: Papers presented at International Seminars/workshops/conferences

1. Social capital and health equity. *Global Health Equity Meeting, University of Rome, November 4-11, Rome, 1996.*
2. Socioeconomic development and health of the poor: exploring pathways of change. *Workshop on Data Analysis, April 21-28, 1997, Harvard Center for Population and Development Studies, Harvard University, Cambridge, MA, USA.*
3. Socioeconomic development and human well-being-a comparative study in Bangladesh. *23<sup>rd</sup> General Population Conference of the International Union for the Scientific Study of Population, Beijing, China, October 11-17 1997.*
4. Socioeconomic development and health: some early tables from the BRAC-ICDDR,B project in Bangladesh. *Fourth Canadian Conference on International Health, Ottawa, Canada, November 9-12, 1997.*

5. Group characteristics and individual behaviour in low-income countries: Are the reported causal relationships the result of heterogeneity bias? *Paper presented at a Population Council Workshop on measuring the impact of micro-credit programmes on fertility, New York, 1997.*
6. Impact of socioeconomic development programme on women and children: some early results from a research project in rural Bangladesh. In: *Panel discussion "Assessing impact, especially for women and children" at Microcredit Summit, New York City, June 25-27, 1998.*
7. Towards socioeconomic and gender equity in health: evidence from Bangladesh. *Social Determinants of Health Equity Meeting, Soly Sombra, Brazil, October 5-11, 1998.*
8. Do poverty alleviation programmes reduce inequalities in health? The Bangladesh experience. *9<sup>th</sup> Annual Public Health Forum: Poverty, Inequality and health. London, UK, April 1999.*
9. Health-seeking behaviour of BRAC member and non-member households. *26<sup>th</sup> Annual Conference of the Global Health council, June 20-22, 1999, Arlington, Virginia, USA.*
10. Impact of socioeconomic development programme on women and children. *26<sup>th</sup> Annual Conference of the Global Health council, June 20-22, 1999, Arlington, Virginia, USA.*
11. Women-focused development programme improves child survival in rural Bangladesh. *26<sup>th</sup> Annual Conference of the Global Health council, June 20-22, 1999, Arlington, Virginia, USA.*
12. Women's involvement in credit-based development interventions and child nutrition. *26<sup>th</sup> Annual Conference of the Global Health council, June 20-22, 1999, Arlington, Virginia, USA.*
13. The impact of women's microcredit on gender and socioeconomic equity in child mortality: evidence from rural Bangladesh. *Presented in Seminar Series, Center for Population and Family Health, Columbia University, October 21, 1999, NY, USA.*

#### F: BRAC RED Reports (unpublished)

1. Women's control over productive assets: role of credit based development interventions.
2. Domestic violence against women: does development interventions matter?
3. Micro-credit and women's mobility: is there a link?
4. A study of the impact of BRAC's programme on the community networks in a village in Matlab, Bangladesh.
5. Role of health and poverty alleviation programmes in reducing gender and socioeconomic inequality in child mortality in rural Bangladesh.
6. Comparing changes in literacy, enrolment and Basic Competency of children in Matlab between 1992 and 1995
7. Exploring changes in the lives of BRAC women: a gender perspective



## Annex 2

### **Working Papers of the BRAC-ICDDR,B Joint Research Project at Matlab**

1. The impact of social and economic development programme on health and well-being: a BRAC-ICDDR,B collaborative project in Matlab -- *Abbas Bhuiya and Mushtaque Chowdhury, 1995.*
2. Assessing change in women's lives: a conceptual framework -- *Marty Chen and Simeen Mahmud, 1995.*
3. Unpacking the black box: studying the relationship between socioeconomic development and health -- *Ian Scott, Tim Evans and Richard Cash, 1995.*
4. Formation of village organizations: the first three months -- *Manzurul Mannan, Mushtaque Chowdhury, Abbas Bhuiya and Masud Rana, 1995.*
5. Participatory methods to assess change in health and women's lives: an exploratory study -- *Alayne Adams, Rita Das Roy and Amina Mahbub, 1995.*
6. Effects of socioeconomic development on health status and human well-being: determining impact and exploring pathways of change: proposals for phase II of the BRAC-ICDDR,B Matlab joint project 1996-2000 AD - *Mushtaque Chowdhury, Abbas Bhuiya, Partrick Vaughan, Alayne Adams and Simeen Mahmud, 1995.*
7. Profitability of BRAC-financed projects: a study of seven microenterprises in Matlab -- *Hassan Zaman, Saima Rahman, Shahed Hussain and Masud Rana, 1995.*
8. An inside look at two BRAC schools in Matlab -- *Sabina Rashid, Mushtaque Chowdhury and Abbas Bhuiya, 1995.*
9. Problems of women-headed households -- *Naomi Hossain and Samiha Huda, 1995.*
10. A qualitative exploration of some socioeconomic issues in south Uddomdi, Matlab -- *Amina Mahbub, Maliha Mayeed and Rita Das Roy, 1995.*
11. Vulnerable of the vulnerables: the situation of divorced, abandoned and widowed women in a rural area of Bangladesh -- *Mehnaaz Momen, Abbas Bhuiya and Mushtaque Chowdhury, 1995.*
12. Microcredit programmes: who participates and to what extent?-- *Hassan Zaman, 1996.*
13. An assessment of client's knowledge of family planning in Matlab -- *Hashima-E-Nasreen, Mushtaque Chowdhury, Abbas Bhuiya, AKM Masud Rana and Indrani Pieris-caldwell, 1996.*
14. Cultural construction of health and the institutional measures of change in rural Bangladesh: the cases of the BRAC village organization and the ICDDR,B MCH-FP programmes in the selected villages of Matlab --*Monirul Islam Khan, Abbas Bhuiya and Mushtaque Chowdhury, 1996.*

15. Studies on the inputs of BRAC in Matlab: sanitary latrines, training, monthly meetings, legal awareness and credit -- *Sadhana Biswas, Syed Masud Ahmed, Sharmin Mahbub, Manzurul Mannan, Shahriar R Khan, Mahmuda Rahman Khan, Masud Rana, Samiha Huda, Shahed Hussain and Karen Moore, 1996.*
16. Perspective of women about their own illness -- *Amina Mahbub, Syed Masud Ahmed, 1997.*
17. An inventory of the development programmes in the selected unions of Matlab by Government and non-Government organisations (excluding BRAC and ICDDR,B) -- *Monirul Islam Khan, Mushtaque Chowdhury and Abbas Bhuiya, 1997.*
18. Poverty and BRAC's Microcredit Programme: Exploring some linkages - *Hassan Zaman, 1997.*
19. Two studies on the impact of Meghna-Dhonagoda flood control, drainage and irrigation project, 1997.
20. An Emic towards well-being - *Amina Mahbub, Rita Das Roy, 1997.*
21. Three studies on HIV/AIDS, 1998.
22. Two studies on Health care-seeking behaviour and Household sanitation practices of BRAC member and non-member households in Matlab, Bangladesh - *Syed Masud Ahmed, Mushtaque Chowdhury, Abbas Bhuiya, 1998.*
23. Psychological well-being of rural women: developing measurement tools - *Mohsina Khatun, Nasreen Wadud, Abbas Bhuiya, Mushtaque Chowdhury 1998.*
24. Participation in BRAC's Rural Development Programme and the impact of group dynamics on individual outcomes - *Simeen Mahmud, Samiha Huda, 1998.*
25. Does involvement of women in BRAC influence sex bias in intra-household food distribution? - *Rita Das Roy, SM Ziauddin Hyder, Mushtaque Chowdhury, Alayne Adams, 1998.*
26. Two studies on nutrition, 1998.
27. Pre-lacteal feeding practices in a rural area of Bangladesh - *Sabah Tarannum, SM Ziauddin Hyder, 1998.*
28. Three studies on the effect of BRAC interventions on the lives of the poor women , 1998.
29. Assailing poverty and patriarchy: how does small money fare? - *Monirul Islam Khan, Mushtaque Chowdhury, Abbas Bhuiya, Masud Rana, 1998.*
30. Women's involvement in BRAC's development activities and child nutrition - *Masuma Khatun, Abbas Bhuiya, Mushtaque Chowdhury, 1998.*