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IN A CENSUS OF RURAL BANGLADESH**

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PREFACE

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) is an autonomous, international, philanthropic and non-profit centre for research, education and training as well as clinical service. The Centre is derived from the Cholera Research Laboratory (CRL). The activities of the institution are to undertake and promote study, research and dissemination of knowledge in diarrhoeal diseases and directly related subjects of nutrition and fertility with a view to develop improved methods of health care and for the prevention and control of diarrhoeal diseases and improvement of public health programmes with special relevance to developing countries. ICDDR,B issues two types of papers: scientific reports and working papers which demonstrate the type of research activity currently in progress at ICDDR,B. The views expressed in these papers are those of authors and do not necessarily represent views of International Centre for Diarrhoeal Disease Research, Bangladesh. They should not be quoted without the permission of the authors.

ABSTRACT

An assessment of the accuracy of 1974 census information of literacy of Cholera Research Laboratory at Matlab, Comilla was made in this investigation. In a systematically selected sample of 11,304 census population a follow-up study was conducted to measure the validity of verbal responses of literacy by means of literacy test. The reported literacy rate of Matlab was 30.3 compared to 24.3 for Bangladesh for the same year. The overall misreporting rate of literacy of Matlab was found to be 7.5. In primary and secondary plus educational level reported literacy rate was 61.9 and 96.8 respectively. The rate of misreporting was 10.6 in primary education compared to 1.5 secondary and above level. In Matlab at least two completed years of schooling was necessary for a person to maintain the ability to read and write a simple vernacular statement. Reported male literacy rate was 41.5 and for that of female 18.5. Males showed higher misreporting rate than those of females in certain age groups but females showed higher misreporting rate than those of males in some other age groups. The Hindu reported literacy rate was 35.2 compared to 29.6 for the Muslims. The Hindus reported higher literacy rate than that of the Muslims in most of the age groups though the Hindus had higher misreporting rate than the Muslims only in age group 10-14.

INTRODUCTION

Literacy according to the United Nations, is defined as the ability of a person to both read and write with understanding, a short simple statement on his everyday life (9). Literacy is a useful index of the educational standard of a country. Education is both an indicator and a human factor in social progress. Literacy is the first essential requisite in education, which in turn is the sin qua non to the process of progress. Accurate and reliable knowledge and data on literacy are essential to undertake epidemiological, nutrition, health and population control programmes. The national economic and health policy makers need to know the correct literacy status of the country's population in order to improve their standard of living and health condition.

This study was undertaken at Matlab thana (Police Station) and its neighbourhood areas in Comilla district of Bangladesh to estimate the accuracy of the customarily collected census information of literacy. The validity of verbal responses of literacy was studied by means of literacy test following a census conducted by the Cholera Research Laboratory during May-June, 1974. Some of the census informations comprising of education level, age, sex and religion are cross-classified with literacy data collected during a followup survey. This paper presents the analysis of (a) literacy rate according to verbal statement, (b) the rate of misreported response obtained through literacy test and (c) comparison of literacy rate of Matlab with those of other Bangladesh sources.

BACKGROUND OF THE STUDY AREA

The Cholera Research Laboratory had been operating a demographic surveillance system in Matlab thana and its surrounding areas involving cross-sectional censuses and longitudinal registration of births, deaths, marriage and movements. This surveillance system began in 1966 and was expanded from time to time by means of periodic census. A census was conducted in 233 villages in 1974 with an estimated population of 277,000. Nearly all the study villages are in Matlab thana but several are in adjacent thanas and not all Matlab thana villages are included in the study area. Several authors have earlier described in detail the basic design and operation of the Matlab

study area (7-8). Matlab is the administrative headquarters of the thana and the main centre of activities. The distance of Matlab from the metropolitan Dacca City is about thirty miles. A metalled road connects the thana with the Comilla district headquarters and the sub-divisional town of Chandpur. Most of the local communication is by country boat or on foot. Matlab is a low-lying area having a net-work of rivers and canals. The average population density is about 1,400 people per square mile. Almost 38 percent of the inhabitants are Muslims and the great majority of the remainder are Hindus (5). Majority of the Muslims are cultivators and the Hindus are mainly fishermen. Major crops are paddy, jute, potatoes, wheat and oil-seeds.

MATERIALS AND METHODS

In May-June, 1974 a census was carried out by teams of trained and experienced Field Assistants with the active help of resident female workers of each village, called Dais. All census workers were given special instructions so that adequate standard and uniformity could be maintained in the procedure of data collection. The work of several census teams were supervised and completed census forms were verified in the field by senior staff members. Discussion meetings were arranged among the Census Teams to improve the quality of work. Pre-planned and pre-tested census proforma (Appendix AI and AII) was used to collect data in a house to house visit. Inquiries included in the census were about selected demographic and socio-economic characteristics of every family member as well as of the family as a whole. Every individual, family and village were identified by well-defined numbering system. The head of the family or in his absence any other family member capable to represent him was usually the respondent at the time of census.

In a sample population of 11,304 persons 5 years and above, 4,824 persons who have ever attended school were used as a frame to estimate literacy rate. 5% of families were systematically selected from every village after the completion of census. The information about the ability to read and write were collected at this stage. The enumeration showed 3,426 literate persons. The family members who reported literate and were present at the time of visit were tested in order to estimate the response bias. Through this procedure a total of 1,892 persons appeared for the test. Among those appeared

142 persons over-reported their ability to read and write. When a census team visited the sample families one of the family members gave information on the ability to read and write for every member with education. The responses, 0-illiterate, R-reads only, W-writes only, RW-reads and writes, was entered in the sub-column designated by 'A' under the 'Read/Write' column (Appendix AII) of the census form. The members who reported ability to read and write (RW) only were tested. They were requested to read and write one out of the two vernacular scripts printed on a separate form (Appendix-B). These scripts contained description of phenomena of local interest and activities of daily life. Lessons on the scripts were alternately offered to family members to avoid influencing response when they were tested. Respondents who could read and write part of either lessons or a few words were considered successful in the literacy test. The responses of the test, 0-illiterate, R-reads only, W-writes only, RW-reads and writes, was recorded in the sub-column designated by 'P' under the 'Read/Write' column (Appendix A II) of the census form. The determination of response bias of literacy was done by comparing the responses of these two columns ('R' and 'A') and the estimate of these biases were presented in terms of percentages.

RESULTS

Reported and misreported literacy according to educational level.

Table 1 presents literacy rates of Matlab by educational level. Total literacy rates are reported 30.3 and misreporting 7.5. The lowest literacy rate (13.0) is reported in educational level I. Reported literacy rate sharply increases in educational level II (61.9). A higher literacy rate (85.9) is reported for educational level III to V and the highest literacy rate (96.8) is reported in educational level VI and above. Reported literacy rate estimated is 61.9 in the primary educational level and 96.8 in the secondary and above level (difference significant, $P < 0.001$).

The highest misreporting rate (56.4) in literacy test is obtained in educational level I. A sharply decreased misreporting rate (24.2) is obtained in the educational level II and still lower misreporting rate (5.7) in educational level III

TABLE 1

REPORTED AND MISREPORTED LITERACY IN MATLAB
BY EDUCATIONAL LEVEL, 1974

Educational Level	Population	Reported Literate	Reported Literacy Rate	Persons tested	Persons Misreported	Misreported Literacy Rate
All	11304	3426	30.3	1892	142	7.5
No education	6480	-	-	-	-	-
I	962	125	13.0	55	31	56.4
II	637	394	61.9	182	44	24.2
III to V	1962	1685	85.9	1004	57	5.7
VI and above	1263	1222	96.8	651	10	1.5

to V. The lowest misreporting rate (1.5) is found in educational level VI and above. In primary and secondary plus educational level, misreporting rate in literacy test is 10.6 and 1.5 respectively (difference significant, $P < 0.01$).

Male and female reported literacy according to age. Table 2 presents reported literacy rates of Matlab by age and sex. Total reported literacy rate is 41.5 for males and 18.5 for females (difference significant, $P < 0.001$). In age group 5-9 the lowest literacy rate (6.5) is reported. A sharp increase of literacy rate (40.9) is reported in age group 10-14. The highest literacy rate (43.8) is reported in age group 15-24. Considerably declining literacy rate is reported in age group 25-44 (30.9) and 45 plus age group (24.6). In age group 5-24 and 25 plus reported literacy rate is 31.8 and 21.3 respectively (difference significant, $P < 0.01$).

Males have reported higher literacy rate (7.5) than that of females (5.1) in age group 5-9 (difference significant, $P < 0.05$). Literacy rate among males (50.1) is more than one and half times higher than that of females (31.7) in age group 10-14 (difference significant, $P < 0.01$). Male literacy rate (57.1) is about two times higher than that of females (29.9) in age group 15-24 (difference significant, $P < 0.001$). Literacy rate of the males (46.9) is about three times higher than that of females (16.6 percent) in age group 25-44 (difference significant $P < 0.001$). Males have reported a literacy rate more than nine times higher (42.9) than that of females (4.6) in age group 45 and above (difference significant, $P < 0.001$). In age group 5-24 and 25 plus reported literacy rate is 38.8 and 45.1 respectively for males (difference significant, $P < 0.01$) compared to 24.0 and 12.0 respectively for females (difference significant, $P < 0.05$).

Male and female misreported literacy according to age. Table 3 presents misreported literacy rates of Matlab by age and sex. Total misreporting rate in literacy test is 7.5 : male misreporting rate 7.7 and female misreporting rate 7.2. The highest misreporting rate (43.3) is found in age group 5-9. A sharp lower misreporting rate (7.9) is obtained in age group 10-14. The lowest misreporting rate (2.7) is found in age group 15-24. Misreporting rate considerably rises in age group 25-44 (7.3) followed by a little higher rate (8.8) in age group 45 and above. In age group 5-24 and 25 plus misreporting rate is 7.3 and 7.8 respectively (difference, not significant to be noted as n.s. hereinafter).

Females have a much higher misreporting rate (54.2) than that of males (37.2) in age group 5-9 (difference significant, $P < 0.001$). On the contrary, males have a much higher misreporting

TABLE 2

REPORTED LITERACY IN MATLAB BY AGE AND SEX, 1974

A g e	<u>P o p u l a t i o n</u>			<u>Reported Literate</u>			<u>Reported Literacy Rate</u>		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
All	11304	5793	5511	3426	2404	1022	30.3	41.5	18.5
5-9	1879	1093	786	122	82	40	6.5	7.5	5.1
10-14	2027	1014	1013	829	508	321	40.9	50.1	31.7
15-24	2448	1250	1198	1072	714	358	43.8	57.1	29.9
25-44	2942	1386	1556	909	650	259	30.9	46.9	16.6
45 and above	2008	1050	958	494	450	44	24.6	42.9	4.6

TABLE 3

MISREPORTED LITERACY IN MATLAB BY AGE AND SEX, 1974

A g e	<u>Persons Tested</u>			<u>Persons Misreported</u>			<u>Misreported Literacy Rate</u>		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
All	1892	1075	817	142	83	59	7.5	7.7	7.2
5-9	67	43	24	29	16	13	43.3	37.2	54.2
10-14	496	277	219	39	28	11	7.9	10.1	5.0
15-24	590	319	271	16	9	7	2.7	2.8	2.6
25-44	490	237	253	36	14	22	7.3	5.9	8.7
45 and above	249	199	50	22	16	6	8.8	8.0	12.0

rate (10.1) than that for females (5.0) in age group 10-14 (difference significant, $p < 0.05$). Male and female misreporting rate in age group 15-24 is 2.8 and 2.6 respectively (difference, n.s.). Misreporting rates are considerably higher for females than those for males (8.7 versus 5.9 and 12.0 versus 8.0) in age groups 25-44 and 45 plus (difference, n.s. for both groups). In age group 5-24 and 25 plus misreporting rate is 8.3 and 6.9 respectively for males compared to 6.0 and 9.2 respectively for females (difference, n.s. for both groups).

Muslim and Hindu reported literacy according to age. Table 4 presents reported literacy rates of Matlab by religion and age. Literacy rate reported for the Muslims is 29.6 and that for the Hindus 35.2 (difference significant, $p < 0.01$). The Muslims and the Hindus reported almost equal literacy rates 6.5 and 6.3 respectively) in age group 5-9. The Hindus have reported higher literacy rate (46.3) than that of the Muslims (40.1) for age group 10-14 (difference slightly significant, $p < 0.10$). The Hindus have reported higher literacy rate (46.5) than that of the Muslims (43.4) in age group 15-24 (difference, n.s.). The Hindus have reported much higher literacy rates (40.0 versus 29.7 and 29.8 versus 23.8) for age groups 25-44 and 45 plus (difference significant, $p < 0.01$ and $p < 0.05$ respectively). In age group 5-24 and 25 plus reported literacy rate is 31.4 and 27.3 respectively for the Muslims (difference significant, $p < 0.01$) compared to 34.9 and 35.6 respectively for the Hindus (difference, n.s.).

Muslim and Hindu misreported literacy according to age. Table 5 presents misreported literacy rates of Matlab by religion and age. Misreporting rate in literacy test for the Muslims is 7.2 and that for the Hindus, 8.9 (difference, n.s.). Misreporting rates for the Muslims and the Hindus are about the same (43.3 and 42.9 respectively) in age group 5-9. The Hindus have much higher misreporting rate (16.7) than that of the Muslims (6.2) in age group 10-14 (difference significant, $p < 0.01$). The Hindus have higher misreporting rate (4.9) than that of the Muslims (2.4) in age group 15-24 (difference, n.s.), contrary to the former two age groups, the Muslims have higher misreporting rates (8.1 versus 4.3 and 9.2 versus 7.0 respectively) in the age groups 25-44 and 45 plus (difference, n.s. for both the age groups). In age group 5-24 and 25 plus misreporting rate is 6.5 and 8.5 respectively for the Muslims (difference, n.s.) compared to 12.0 and 5.1 respectively for the Hindus (difference significant, $p < 0.05$).

TABLE 4

REPORTED LITERACY IN MATLAB BY AGE AND RELIGION, 1974

A g e	<u>P o p u l a t i o n</u>		<u>Reported Literate</u>		<u>Reported Literacy Rate</u>	
	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu
All	9918	1386	2938	488	29.6	35.2
5-9	1657	222	108	14	6.5	6.3
10-14	1770	257	710	119	40.1	46.3
15-24	2151	297	934	138	43.4	46.5
25-44	2597	345	771	138	29.7	40.0
45 and above	1743	265	415	79	23.8	29.8

TABLE 5

MISREPORTED LITERACY IN MATLAB BY AGE AND RELIGION, 1974

A g e	<u>Persons Tested</u>		<u>Persons Misreported</u>		<u>Misreported Literacy Rate</u>	
	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu
All	1590	302	115	27	7.2	8.9
5-9	60	7	26	3	43.3	42.9
10-14	418	78	26	13	6.2	16.7
15-24	509	81	12	4	2.4	4.9
25-44	397	93	32	4	8.1	4.3
45 and above	206	43	19	3	9.2	7.0

DISCUSSIONS

The literacy rate of Matlab (30.3) is much higher than that of Bangladesh (24.3) in the same year (Appendix-C). The presence of more primary schools in Matlab than that of Bangladesh average is one of the main reasons which might explain the higher literacy rate of Matlab. There are 473 children of school going age, 5 to 14 years per one primary school in Matlab area* compared to 571 such children in Bangladesh.** In Matlab at least two completed years of schooling is necessary for a person to maintain the ability to read and write a simple statement. On completion of one year of school education only less than one half of the literate persons have succeeded compared to more than three-fourth on completion of two years. In 1972 a literacy survey of 28,736 people in several villages around Savar was carried out on the basis of vernacular newspaper reading by respondents. It was found that only 8.4 percent of men and 1.2 percent of women were literate and at least five years of schooling was necessary for a person to maintain the ability to read (4). The very low literacy rate found in the above study might be due to application of more difficult testing criteria than those used in this study. Newspapers usually contain complex words, unfamiliar terminologies and media of test. Printed letters in a newspaper are usually smaller and may appear difficult to persons who claim minimum standard of literacy. Newspaper is deemed more as an index of modernity than simple statement of daily events.

Admission in primary schools takes place little late in rural Bangladesh. The obligation of attending one or two years of religious education in Maktab and performance of domestic activities are the main obstacles in early school attendance. Few children under age ten are found literate. Much higher literacy rates are reported by adults and elderly persons than those under age ten. Performance of adults and elderly persons in the literacy test is much better than that of young children who are beginners of primary education. Adults and elderly persons, on the otherhand, includes literate persons who have acquired higher educational levels. Grown-up children and young people have reported highest literacy rate and registered

* Census data of Matlab in 1974 combined with a special survey which enumerated the number of primary schools in the area in 1975.

** Statistical year book of Bangladesh, 1975.

superior performance in literacy test. Some literate persons of this group may be presently continuing education in higher grades and some others who have discontinued should have more maturity of intelligence and understanding than those persons junior to them. They should have received better educational opportunities than those of adults and elderly persons who have reported lower literacy rate and have shown inferior performance in literacy test.

Male literacy rates are significantly higher than that of females in all age groups. This fact reflects the traditional disparity in educational field between the two sexes in rural society. However, in the literacy test certain groups of females have shown better performance than that of the males. Though minor children, adults and elderly persons have performed better than their female counterparts, grown-up female children have reversed the performance in literacy test by responding much better than that of the males. Grown-up female children might come of families with higher socio-economic status. They might have received better parental care than that of grown-up boys due to their prospect as future brides. The males and females of young age have performed equally in literacy test due to their mature understanding. It appears that literate grown-up female children and young females are overcoming the obstacle of purdah system. This is more evident from the fact that the females are now-a-days competing with their male counterpart in the field of higher education in the urban areas. Literacy data of recent years show that females have made relatively better progress than males. During the intercensus period of 1961 and 1974 the literacy rate of Bangladesh increased by 3.6 percent for the males and 5.2 percent for the females (Appendix-C). This sex difference between literacy rates could be viewed as an achievement towards social status of girls. Given increased literacy women are likely to have more effective participation in decision-making of households. In childbearing period of women such participation in decision-making might have impact in making choice regarding number of children a couple would like to have. A study of socioeconomic survey of working versus non-working women of Dacca city showed that in urban area of Bangladesh education is inversely related to fertility and positively associated with practice of contraception. It was further noted that female education was particularly found to be more effective in reducing family size than husband's education (2). Two other studies have shown that female education and literacy are greatly responsible for postponement of marriage which causes reduction in birth rates. "The postponement of marriage to ages beyond 20 tends biologically to reduce births. Sociologically, it gives women time to get a better

education, acquire interests unrelated to the family and develop a cautious attitude towards pregnancy"(1). "The average age at marriage for girls in Uttar Pradesh, Madhya Pradesh and Bihar ranges between 13 and 14. Literacy among women in these states is the lowest in the country, except for Jammu and Kashmir. In Kerala, where literacy is as high as 39.00 percent, the average age at marriage is 21 years"(3).

In Matlab study area rate of reported literacy is higher among the Hindus compared to the Muslims. Literacy rate of the Hindus is proportionately higher among elderly persons than that of the younger ones. Hindu grown-up children and young persons have much higher misreporting rates compared to the Muslims. Muslim adults and elderly persons on the otherhand, have much higher misreporting rates than that of the Hindus. It appears that the Hindus could still maintain their traditional interest in the field of education though the Hindus who are of school going age have not performed well in literacy test. This might be attributed to the increasing economic hardship the Hindus might have undergone. Another possibility of explaining this deficiency might be that the Muslims are presently taking greater interest in education than they showed in the past.

CONCLUSION

Quality of census data of literacy and their estimation depends on the definitions employed and the competence and accuracy of data collection. An examination of the last two national census definitions of literacy shows that a uniform concept of literacy was not followed for Bangladesh. Though 1961 census considered persons who could read any language with understanding and write that language as literates, 1974 census included those persons as literate who could read and write a simple letter in any language (6). It should be noted that the definition of literacy used during 1961 national census is more comparable to the concept of literacy used in this investigation.

The findings of this study show that the rate of response bias is significantly high (10.6) in the primary education compared to that of secondary and above education level (1.5). Considered in the light of the findings of this study it can be concluded that a more refined literacy rate of Bangladesh would have been less than what was found in the 1974 census. The above facts reflect a poor picture of status of literacy in Bangladesh.

To make proper assessment of Bangladesh literacy we urgently need an acceptable definition fulfilling the standard criteria enanciated by the U.N. To eliminate the most response biases of literacy, correct and timely steps should be taken for smooth functioning of the primary education.

Since the time span between censuses is usually quite long, literacy rate based on literacy test in sample surveys may provide current and more refined rate than that of national census. Sample survey is a more flexible data collection instrument than the censuses. It is possible to include questions on literacy in the survey that would be deemed marginal to or inappropriate for a census inquiry. This study presented a unique methodological issue which was probably not explored before. The test of this methodology was facilitated in Matlab study area where the Cholera Research Laboratory developed an excellent demographic surveillance system for over a decade. This methodology which combined census and sample survey deserves to be tested in other localities of Bangladesh.

Appendix-A (I).

Village : _____ Code : _____ Family No. : _____ Previous Family No. : _____

Bari : _____ Religion : _____

CENSUS — 1974
CHOLERA RESEARCH LABORATORY
MATLAB, COMILLA

Ind. No.	Mother's No.	Dwelling No.	Name	Age	Sex	Marital Status	Relation to Head	Date of Birth	Date of Death	Date of M-In	Date of M-Out	IMMUNIZATION SCHEDULE								Remarks
												T	Date	T	Date	T	Date	T	Date	
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				

Any Dwelling with Tin Roof ? Yes ☐ No ☐

Date of Census : _____ Signature : _____ Family Type : _____ Family No. : _____

Appendix - A(II)

Village : _____ Code : _____ Family No. : _____ Previous Family No. : _____

Bari : _____ Religion : _____ Date Completed : _____

Ind. No.	Mother's No.	Dwelling No.	Name	Age	Sex	Marital Status	Relation to Head	Date of Birth	Education	Read/Write	Occupation			
											Primary		Secondary	
											P	A	I	O
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

Dwelling No.	Roof		Walls			Dimensions (feet)	
1	Tin ☐	Other ☐	Tin ☐	Tin-mixed ☐	Other ☐	Length	Breadth
2	Tin ☐	Other ☐	Tin ☐	Tin-mixed ☐	Other ☐	Length	Breadth
3	Tin ☐	Other ☐	Tin ☐	Tin-mixed ☐	Other ☐	Length	Breadth
4	Tin ☐	Other ☐	Tin ☐	Tin-mixed ☐	Other ☐	Length	Breadth

CENSUS — 1974 CHOLERA RESEARCH LABORATORY MATLAB, COMILLA

Land Yield	Taka	Maunds	Unk
Cash			
Paddy			
Kaon			
Wheat			
Potato			
Swt. Pot.			
Jute			

Receive Remittance?.....Yes ☐ No ☐
Own radio?.....Yes ☐ No ☐
Own any watch?.....Yes ☐ No ☐
Own hurricane?.....Yes ☐ No ☐
Own lep (quilt)?.....Yes ☐ No ☐

Number of cows:.....☐
Number of boats:.....☐
Kosha ☐ Dhusha ☐ Baro ☐

Sources of water during Winter Season
Oct.-Jan. (Aswin 16th-Magh 15)

	River	Canal	Tank	Ditch	T.W.	Other	Unk.
Drink							
Cook							
Bathe							
Wash							

Use fixed latrine?.....Yes ☐ No ☐
Latrine within
15 yds. from a
used water source?.....Yes ☐ No ☐
Majority usually use
pot for washing
after defecation?.....Yes ☐ No ☐

শিক্ষার পরীক্ষা-১

আমার বাড়ী মতলবের রামদাসপুরে। মতলব চাঁদপুর মহকুমার অধীনে। নৌকাই যাতায়াতের একমাত্র উপায়। চারিদিক নদ-নদী খাল-বিলে ভরা। কৃষিকাজ ও মাছ ধরা এখানকার দুইটি বড় পেশা। নদীতে অনেক রকমের মাছ পাওয়া যায়। মাঠে ধান ও আলু বেশ হয়। মতলব একটি বড় বাজার। এখানে একটি ভাল কলেজ আছে। ইহা গৌরবের বিষয় যে এখানে কলেরা হাম্পাতালের একটি শাখা আছে। এই হাম্পাতালে অতি উচ্চমানের আধুনিক চিকিতসার সুযোগ রহিয়াছে। মরার মত কলেরা রোগীও ডাক্তারের কুশলী চিকিতসায় বাঁচিয়া উঠে।

শিক্ষার পরীক্ষা-২

আলী নিয়মিত লেখাপড়া করে। রোজ সকালে সে ঘুম থেকে উঠে। সে ভাল করে হাত মুখ ধুয়ে নেয়। ঘুড়ি ও গুড় দিয়ে নাশতা করে বই পড়তে বসে। বই পড়া শেষ করে পাঠশালার জন্য তৈরী হয়। রোজ সে ঠিক সময় মত পাঠশালায় যায়। সে খুব ভাল ছাত্র। ছুটির পর বাড়ীতে এসে বইপত্র রেখে মাঠে খেলা করতে যায়। সে বল খেলতে ভালবাসে। বাড়ীতে ফিরে সময় মত পড়তে বসে। পড়া শেষ করে রাতের খাবার খায়। তারপর নিজের বিছানায় শুয়ে পড়ে। সকাল বেলা মোরগের ডাকের সাথে সাথে তার ঘুম ভেংগে যায়।

APPENDIX C

REPORTED LITERACY OF BANGLADESH BY SEX, 1961 AND 1974

Census year	<u>P o p u l a t i o n</u>			<u>L i t e r a t e P e r s o n s</u>			<u>L i t e r a c y R a t e</u>		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
1961*	41576	21769	19807	8277	6376	1901	19.9	29.3	9.6
1974**	59404	31056	28348	14420	10223	4197	24.3	32.9	14.8

Source : *

Population census of Pakistan 1961, Census Bulletin No. 2

**

Statistical year book of Bangladesh, 1975

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REFERENCES

1. Blake J: World Population Conference, Belgrade, 1965, New York, UN: 132
2. Chowdhury RH: Education and fertility in Bangladesh. Bangladesh Dev Stud 5(1):98, Jan 77
3. Chandrasekar S: Should we raise the age of consent? Illustrated Weekly. Aug 13, 1967
4. Chowdhury Z: The paramedics of Savar: an experiment in community health in Bangladesh. Dev Dialog 1:41-49, 1978
5. Cholera Research Laboratory: Demographic Surveillance System-Matlab. V.1. Methods and procedures. Dacca, Cholera Research Laboratory, 1978 (CRL Scientific Report, No. 9):3
6. Bangladesh. Census Commission. Bangladesh population census 1974. Dacca, 1974:137
7. Mosley WH, Chowdhury AKMA, Aziz KMA: Demographic characteristics of a population laboratory in Rural East Pakistan. CPR Pop Res Sept 1970
8. Mosley WH, Bart KJ, Somer A: An epidemiological assessment of cholera control programmes in Rural East Pakistan. Int J Epidemiol 1:5-11, 1972
9. United Nations: Principles and recommendations for the 1970 population census. New York, 1967. (Statistical papers, series M, No. 44): 50

ICDDR,B (CRL) publications can be obtained from Publications Unit, International Centre for Diarrhoeal Disease Research, G.P.O. Box 128, Dacca - 2, Bangladesh.

List of current publications available:

A. CRL Annual Report 1976.

CRL Annual Report 1977.

B. Working Paper:

No. 1. The influence of drinking tubewell water on diarrhea rates in Matlab Thana, Bangladesh by George T. Curlin, K.M.A. Aziz and M.R. Khan.

No. 2. Water and the transmission of El Tor Cholera in rural Bangladesh by James M. Hughes, John M. Boyce, Richard J. Levine, Moslemuddin Khan and George T. Curlin.

No. 3. Recent trends in fertility and mortality in rural Bangladesh 1966-1975 by A.K.M. Alauddin Chowdhury, George T. Curlin.

No. 4. Assessment of the Matlab Contraceptive Distribution Project - implications for program strategy by T. Osteria, Makhlisur Rahman, R. Langsten, Atiqur R. Khan, Douglas H. Huber, W. Henry Mosley.

No. 5. A study of the field worker performance in the Matlab contraceptive distribution project by Makhlisur Rahman, T. Osteria, J. Chakraborty, Douglas H. Huber and W. Henry Mosley.

No. 6. Constraints on use and impact of contraceptives in rural Bangladesh: Some preliminary speculations by R. Langsten, J. Chakraborty.

No. 7. The demographic impact of the contraceptive distribution project by T. Osteria, W.H. Mosley and A.I. Chowdhury.

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No. 11. Demographic Surveillance System - Matlab. Volume Three. Vital events and migration, 1975 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 12. Demographic Surveillance System - Matlab. Volume Four. Vital events and migration, 1975 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 13. Demographic Surveillance System - Matlab. Volume Five. Vital events, migration, and marriages - 1976 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

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No. 16. Water sources and the incidence of cholera in rural Bangladesh by Moslemuddin Khan, W. Henry Mosley, J. Chakraborty, A. Majid Sardar and M.R. Khan.

No. 17. Principles and prospects in the treatment of cholera and related dehydrating diarrheas by William B. Greenough. III.

No. 18. Demographic Surveillance System - Matlab. Volume Six. Vital events and migration, 1977 by Aporn Samad, Kashem Sheikh, A.M. Sarder, Stanley Becker and Lincoln C. Chen.

No. 19. Cholera due to the El Tor biotype equals the Classical biotype in severity and attack rates by Moslemuddin Khan and Md. Shahidullah.

D. Special Publication:

No. 1. Management of cholera and other acute diarrhoea in adult and children - World Health Organization.

No. 2. Index to CRL Publications and Scientific Presentations 1960-1976 by Susan Fuller Alamgir, M. Shamsul Islam Khan, H.A. Spira.