

Sanitation Practices in Two Villages in Comilla

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Introduction

Malnutrition is widespread in Bangladesh and the condition of children is very alarming^{1,2}. About 56% of the children aged 6-71 months suffer from chronic protein-energy malnutrition³, 8% of the children suffer from acute protein-energy malnutrition³, 75% of the children suffer from iron deficiency anaemia² and one million out of 23 million children in the country suffer from vitamin A deficiency⁴.

Environmental sanitation and personal hygiene are important factors influencing the nutritional status of the population particularly of the children. Over 90% of the children aged 1-12 years have intestinal parasite infestation,⁵ and children during the first two years of life may suffer as many as seven separate episodes of diarrhoea each year⁶. The high prevalence of malnutrition and infection is the prime cause of many childhood mortality and morbidity. Persistent diarrhoea in association with malnutrition caused 13% of all deaths in 0-4years old children

and 34% of all deaths in 1-4 year age group.⁶ Unsanitary disposal of human excreta and domestic wastes, and use of unsafe water are the common causes of infection. Disease germs leaving the body pass into food or water by flies, dusts and other agents carrying the filths and pass back into human body spreading the disease further and aggravating malnutrition.

Studies relating to sanitation behaviour in Bangladesh are highly limited. DPHE-UNICEF-WHO⁷ and Aziz et al⁸ reported some valuable information on the behavioural and institutional aspects of sanitation in selected rural areas. Wahed⁹ provided a useful overview of the general water supply and sanitation programme in Bangladesh.

In this study an attempt is made to analyse the sanitation practices in two villages in Comilla. Specifically, households' use of latrines, safe water and disposal of domestic wastes are analysed. It is expected that the findings will be useful for understading the present sanitation practices and

* Bangladesh Journal of Nutrition Vol. 4, No. 2 , June 1991. Printed in Bangladesh
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formulating measures for sanitation development in the areas.

Materials and Methods

The study was conducted in Dhamghar village of Muradnagar upazila and Gobarchitra village in Faridganj upazila both in Comilla region. Dhamghar is a flood-prone village. Gobarchitra lies in the flood protected area of Chandpur irrigation project. The villages were selected purposively for the study.

From each selected village 36 households were selected randomly. Thus in all 72 households were selected. Information from the selected households were collected through home visits by

interviewing the female heads of the households supplemented by interview of the male members of the households. Data for the study were collected between November 1989 and January 1990.

Results

The results are presented in tables 1 to 6. Table 1 shows some selected characteristics of the sample households. Tables 2 and 3 show the use of latrines by the sample villages and by population groups. Tables 4 and 5 show the disposal of domestic wastes by the sample villages and by family types. Finally, table 6 shows the use of safe drinking water by the sample villages and family types.

Table 1. Sample characteristics

Characteristics	Unit	Gobarchitra	Dhamghar
Location		Flood free	Flood prone
Average family size			
Male	No.	3.9	4.2
Female	No.	2.2	2.8
Total	No.	6.1	7.0
Occupation of family head			
Agriculture	%	87.5	70.8
Business	%	8.3	8.4
Service	%	4.2	20.8
Average farm size			
Small farms	acres	1.1	0.5
Medium farms	acres	2.0	2.0
Large farms	acres	3.2	3.7
All farms	acres	2.1	2.1
Average Homestead area			
Small farms	Decimals	12	20
Medium farms	Decimals	35	43
Large farms	Decimlas	64	52
All farms	Decimals	38	44

Farms are classified as follows:

Small farms means farms having a cultivated area of less than 1.5 acres, Medium farms means farms having a cultivated area of 1.5 acres to less than 3 acres, and large farm means farms having a cultivated area of 3 acres or more.

Table 2. Use of latrine by location

Latrine	Percentage of families		
	Gobarchitra	Dhamghar	All villages
Sanitary	15.3	9.7	12.5
Water sealed	9.7	11.1	10.4
Katcha open pit	26.4	40.3	33.3
Pucca open pit	18.0	4.2	11.2
No fixed place	30.6	34.7	32.6

Table 3. Use of latrine by population group

Latrine	Male %	Female %	Children %
Sanitary	20.8	16.7	0
Water sealed	12.5	18.7	0
Katcha open pit	45.8	52.1	2.1
Pucca open pit	18.8	10.4	4.2
No fixed place	2.1	2.1	93.7

Table 4. Disposal of domestic wastes by location

Disposal	Percentage of families		
	Gobarchitra	Dhamghar	All villages
Burn out	0	4.2	2.1
Thrown in ditch	16.7	8.3	12.5
Thrown in drain	8.3	8.3	8.3
No fixed place	75.0	79.2	77.1

Table 5. Disposal of domestic wastes by family type

Disposal	Small farm families	Medium farm families	Large farm families
	%	%	%
Burn out	6.3	0	0
Thrown in ditch	12.5	18.8	6.3
Thrown in drain	6.2	12.5	6.2
No fixed place	75.0	68.7	87.5

Table 6. Use of safe drinking water by location and family type

Location	Percentage of households not using safe drinking water			
	Small farm	Medium farm	Large farm	All farm
Gobarchitra	25.0	12.5	0	12.5
Dhamghar	37.5	25.0	12.5	25.0
All locations	31.2	18.7	6.2	18.7

Discussions

Characteristics of Sample Households

The average family size in Gobarchitra village is 6.1 members and in Dhamghar village 7 members. 87% of the household heads in Gobarchitra village and 71% of the household heads in Dhamghar village had agriculture as major occupation. The average farm size in both the villages was 2.1 acres. The average homestead area was 0.38 acres in Gobarchitra village and 0.44 acres in Dhamghar village.

In Comilla region the average family size was 5.8 members, 89% of rural household heads had agriculture as major occupation, and average farm size was 1.3 acres¹⁰. The average family size and the average farm size were substantially larger, and the percentage of household heads having agriculture as the main occupation was substantially smaller in the sample households than in the households in Comilla

region. So the sample cannot be considered as representative of the Comilla region or of the country. The discrepancy of household characteristics between the sample households and the households in Comilla region is probably due to the limited size of sample in this study.

Use of Latrine by Location

There is little variation in the latrine use pattern in the villages. About 31% of the households in Gobarchitra village and 35% of the households in Dhamghar village had no latrine. The household members defecated either in neighbours' latrines or in open place. Katcha open pit latrines, pucca open pit latrines and open places are all unhygienic places for defecation. Given this, 75% of the households in Gobarchitra village and 79% of the households in Dhamghar village had unhygienic defecation facilities. On the average, 23% of the households had hygienic latrines.

Use of Latrine by Population Group

About 94% of the children did not use latrine for defecation and all children defecated in unhygienic places. Even children of families having sanitary or water sealed latrines did not use the facilities rather chose an open place for defecation. Overall, 65% of female and 67% of male members defecated in unhygienic latrines and 33% of male and 35% of female members defecated in hygienic latrines.

Disposal of Domestic Waste by Location

There is little variation in the disposal of domestic wastes in the villages. About 79% of the households in Dhamghar village and 75% of the households in Gobarchitra village had no fixed place for waste disposal. They disposed the wastes indiscriminately in and around the homesteads. About 25% of the households in Gobarchitra village and 17% of the households in Dhamghar village disposed the wastes in the nearest ditches or drains. Disposal of wastes in ditches, drains and in and around the homesteads are unhygienic practices of waste disposal. Considering this, all households in

Gobarchitra village and 96% of the households in Dhamghar village disposed their wastes in unhygienic manner. Overall, 2% of the households disposed domestic wastes hygienically by burning off the wastes.

Disposal of Domestic Waste by Family Type

About 87% of the large farm families, 75% of the small farm families and 69% of the medium farm families disposed their domestic wastes in and around the homesteads. All large farm families and medium farm families disposed their wastes unhygienically in ditches, drains and in and around the homesteads while 94% of the small farm families did so. Only 6% of the small farm families disposed the wastes hygienically by burning off the wastes.

Use of Safe Drinking Water

The households varied considerably in their use of safe drinking water both by villages and by family types. About 25% of the households in Dhamghar village and 12% of the households in Gobarchitra village had no access to safe drinking water. They used water from ponds, wells or canals for drinking. About 31% of the small farm families

had no access to safe drinking water compared to 19% of the medium farm families and 6% of the large farm families. All the large farm families in Gobarchitra village had access to safe drinking water. The higher access of the large farm families to safe drinking water was probably due to their higher level of purchasing power that enabled them to buy safe drinking water facilities. The highest proportion of households having no access to safe drinking water was 37% belonging to small farm families in Dhamghar village.

Overall the findings support Aziz et al⁸ and Wahed⁹ who observed inadequate availability and poor utilization of sanitation facilities in rural areas. The reasons for this are not generally economic, rather lack of awareness of the people about the benefits of a sanitary living. For example, the most frequent answer for households' participation in a sanitary latrine programme in Mirzapur upazila was the social status, beautification, privacy and no bad smell attached to it rather than health related⁸. Sometimes social stigmas and cultural taboos also prevent introduction of simple sanitary measures in rural

areas. This may be another cause for limited success of rural sanitation programmes in Bangladesh⁹.

Summary

A study of 72 households in two villages in Comilla indicate that 33% of the households had no latrine and 77% of the households had no hygienic defecation facility. About 67% of males, 65% of females and all children defecated in unhygienic places while 94% of the children defecated in open places. About 77% of the households had no fixed place for waste disposal and 98% of the households disposed wastes in unsafe places. About 20% of the households had no access to safe drinking water. Inaccess to safe drinking water was more common in small farm households than in medium and large farm households.

The findings imply that vigorous sanitation programmes are needed to improve rural sanitation in Bangladesh. The programmes must accompany appropriate health and sanitation education programmes to derive the full benefits of the programmes.

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