Watch Report

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Raising sanitary latrine use in rural Bangladesh: Can BRAC play any role?

Abstract: This study estimates the sanitation coverage and investigates impact of the participation in development program on the sanitation behavior in rural Bangladesh. Findings reveal that nearly a quarter of the study population has been using sanitary latrines though there are differences in use in terms of age, sex, education, occupation, land size and involvement with credit based development program. The multivariate analysis reveals that households involved with BRAC program are 3.66 times more likely to use sanitary latrine ($p<.01$) than those who are socioeconomically similar with BRAC members but not involved in such program controlling for education and occupation of the household head. When other factors such as religion, ownership of land, housing condition, level of media exposure and the presence of BRAC programs are systematically added to the regression equation, the role of BRAC on sanitation behavior is still found significant. The study argues that social and behavioral aspects of the organized development program in rural Bangladesh can significantly increase safe sanitation practice in a traditional society.

Introduction

Although Bangladesh is committed to provide safe drinking water and sanitary facilities to all its population by the year 2000, the performance in providing safe sanitation in the rural areas has been far behind the target. A large proportion of the population living in Bangladesh is still deprived of having access to hygienic and safe sanitary facilities. Among them, the poor suffer the most because they lack both the means to get such facilities and knowledge on how to minimize the negative effects of the unsanitary environment. The sanitation coverage in Bangladesh was only 2% in 1980-81 that reached to 35% in 1995 (Dodge, 1995; Hasan, 1995).

Sanitation was usually understood to mean sewerage which was very expensive and not affordable to low-income countries (Marais, 1973). But the awareness of unconventional approach and that sanitation has a social dimension has increasingly becoming more widespread. Thus, although the sanitation coverage in Bangladesh has increased in recent years, providing sanitation services for all by the year 2000 appears to be an unattainable dream (Heijnen, 1995).

It appears that during the last decade, the provision of safe drinking water received priority budget allocations over the construction of sanitary latrine for the rural poor (Dodge, 1995). The role of NGOs in expanding safe sanitation coverage in Bangladesh has been remarkable. As many as 300 non-government organizations (NGOs) such as BRAC, Grameen Bank, CARITAS, Proshika, CONCERN, VERC, etc. are now involved in implementing the nationwide sanitation program (Shailo, 1995). This report presents the sanitation coverage and its socioeconomic differentials, and examines the role of credit based development program of BRAC in raising the use of sanitary latrines in the rural areas of Bangladesh.

Methodology

BRAC has a nationally representative intensive monitoring system, known as *Watch*, in 70 villages located in ten districts of Bangladesh. The *Watch* documents the changes in social life of the community as a result of development programs in such areas as credit-based income generating activities, essential health care for the poor, and legal and social awareness for women.

A total of 1,556 household heads was randomly selected and interviewed in October 1995. Nearly a third of the sample households had participated either in BRAC's Rural Development Program (RDP) or credit-based income generating projects operated by other NGOs while the other two-third households were not involved with such interventions. In our analysis, the non-program households are categorized into *target* and *non-target* based on their

eligibility to be involved with the credit-based development program. This made the study to be based upon a four-cell experimental design wherein 16 percent of all sample households had credit support from BRAC only, about 24 percent received services from other NGOs, nearly 19 percent of credit eligible households never received any support, and the remaining 41 percent households were non-eligible better-off households of the study area.

Table 1. Percent of households using types of latrine by development program

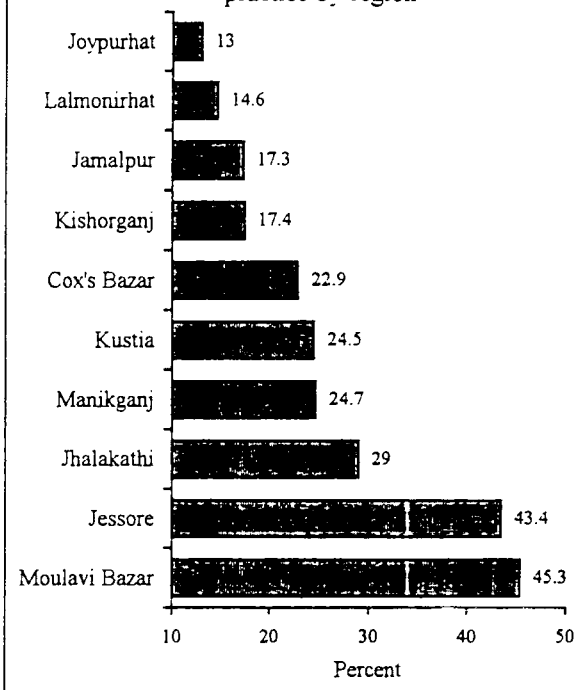
Development Program	Type of Latrine			
	Sanitary	Pit	Open	No Fixed
All	24.8	11.0	40.2	24.0
Village				
BRAC	27.4	13.7	44.2	14.7
Non-BRAC	18.6	4.4	30.5	46.5
NGO Involvement				
Program				
BRAC only	27.0	10.2	52.5	10.2
Other NGOs	20.9	12.2	37.8	29.1
Non Program				
Target	8.4	12.7	47.1	31.8
Non target	35.8	9.5	32.6	22.1

Findings and Discussion

Despite efforts of the government and other development agencies, only a quarter of the adult household members (24.8%) have been using sanitary latrine in rural Bangladesh (Table 1). About 11% households had pit latrine and the rests had either been using open latrine (40.2%) or had no fixed place (24%) to defecate. The presence of BRAC appears to have positive association with the use of safe (sanitary or pit) latrines. When the sanitation behavior is differentiated by program involvement, the sanitary latrine use appears to be significantly higher among the households involved with development programs than the comparable non-program target households.

Regional variation in the use of sanitary latrine was very high ranging from 45.3% in Moulavi Bazar to only 13% in Joypurhat (Figure 1). Among other things, traditional sanitary practice in the locality and environment are believed to influence the use of sanitary latrine. In the North (Joypurhat and Lalmonirhat regions) where unsafe defecation practice was very high, pathogen-rich fecal pollution of open air and surface water was expected to be much higher than other regions of the country.

Figure 1. Coverage of safe sanitary practice by region



Most of the rural households were not using safe sanitary latrine primarily because they did not own or had access to sanitary latrine facilities. Table 2 indicates that nearly 30.3% of the households expressed their intention to build a latrine for their household members although about 27.8% of the households showed no interest and 17% were not sure what to do about it.

Table 2. Distribution of responses regarding relevant issues to build a sanitary latrine of those not having any latrine

Issues relevant to building latrine	Response		
	Yes	No	Uncertain
Intended to buy	30.3	27.8	17.0
Will buy if get credit	35.1	28.3	11.8
Agree to build jointly	10.1	56.0	8.8

When asked whether they should accept credit with a low interest rate to buy and install a slab latrine for their households, nearly 35.1% showed their interest to be involved in such a scheme while quite a large proportion (28.3%) declined to receive credit. When asked whether they should build a latrine jointly with their neighbors, only 10.1% agreed for such a venture. Inherent need or intention to buy a safe latrine was significantly higher among BRAC members (48.9%) followed by other NGO members (45.7%) than households not involved with any

development program. Such latent need could be raised even further if supervised credit and other supports were provided to them (Hadi et al., 1996).

Table 3. Percent of household members not regularly using latrine by type and reason of non use and involvement with development program

Reasons of non use	Program		Non Program		All
	BRAC	Other	TG	NTG	
Stay outside	4.5	3.0	2.0	4.2	3.5
Inconvenience	6.1	3.8	2.6	6.9	5.2
Lack of access	74.6	79.9	93.1	65.7	75.8
Others	1.6	3.0	0.3	3.1	2.3
Safe latrine user	*13.1*	*10.3*	*2.0*	*20.1*	*13.2*

While a quarter of the households claimed to use sanitary latrines, regular use was much lower (only 13.2%) than occasional users (Table 3). Nearly 75.8% cited the lack of access as the primary reason for not using sanitary latrine. Lack of access was quite high among the non-target households (65.7%) although lower than other groups. Staying outside home (3.5%) and inconveniences (5.2%) were also reported as other reasons. Of the target households, regular use of sanitary latrine among BRAC members (13.1%) was much higher than members of other NGOs and non-program target households.

Table 4. Socioeconomic differentials of the use of latrine by type and involvement with development program

Socioeconomic Characteristics	Type of Latrine			
	Sanitary	Pit	Open	No Fixed
Education				
No school	15.7	12.2	44.2	27.9
I - V	30.3	11.0	39.7	18.9
VI +	48.8	6.9	27.3	17.0
Religion				
Muslim	23.3	11.8	40.8	24.2
Hindu	36.7	5.0	35.6	22.8
Land				
Landless	17.3	12.7	45.4	24.6
1 - 199 dec	26.6	9.4	39.1	24.9
200 +	48.5	7.5	25.0	19.0
Exposure to Media				
Poor	19.0	10.7	45.0	25.3
Average	37.6	12.1	28.4	21.8
High	74.3	8.6	11.4	5.7

Sanitation behavior widely differed by socioeconomic characteristics of the households (Table 4). The prevalence of sanitary latrines was higher if the household head was highly educated and better exposed to the media than otherwise. Data also indicate that the amount of land owned and religious belief were positively associated ($p<.01$) with safe sanitary practice. It should be noted that a large proportion of socioeconomically better off households in terms of education, occupational status and land ownership was engaged in indiscriminate defecation practice.

Multivariate analysis also reveals that participation in development program has a strong and statistically significant positive effect on the use of sanitary latrine regardless of socioeconomic status of the households (Table 5). Model I shows that households involved in the credit based development program of BRAC were nearly 3.7 times more likely to use sanitary latrines than comparable non-program target households controlling for socioeconomic factors of the household head. Model II indicates that adding the presence of BRAC in the Model I weaken the positive effects of development programs on safe sanitary practice suggesting that BRAC program may have indirect impact on sanitary latrine use.

Table 5. Odds ratios of selected explanatory variables to predict the use of sanitary latrine among sample households controlling for education, occupation, land, housing condition, media exposure and religion

Predictors	Model	
	I	II
NGO Involvement		
No Program (Target)	1.0	1.0
BRAC only	3.66*	3.28*
Other NGOs	2.47*	2.49*
No Program (Non target)	3.43*	3.51*
Village		
BRAC		1.0
Non-BRAC		0.53*

* $p< .01$

Table 6 presents odds ratios of selected explanatory variables to predict the intention of buying sanitary latrine among sample households. Data suggest that the intention to procure a slab latrine among BRAC group members was 1.77 times ($p<.01$) and households involved with other development programs is 1.54 times ($p<.05$) higher than comparable non-program target households when such other household socioeconomic characteristics as education

and occupation of the household head, land ownership and religious belief, and the presence of BRAC in the study village are controlled. If credit is provided, the probability among both BRAC and other NGO members is expected to increase even further to procure the sanitary latrine when household socioeconomic characteristics are considered same.

Table 6. Odds ratios of selected explanatory variables to determine unmet need of sanitary latrine among sample households controlling for education, occupation, religious belief, land ownership and presence of BRAC

NGO Involvement	Unmet Need	
	Intends	Credit
No Program (Target)	1.0	1.0
BRAC only	1.77**	1.91**
Other NGOs	1.54*	1.88**
No Program (Non target)	1.01	0.61**

* $p < .05$
** $p < .01$

Although the safe sanitary practice is still low in the rural areas in Bangladesh, the study suggests that the development intervention, particularly BRAC's rural development program, has strong and statistically significant impact on safe sanitary practice.

The problem of poor sanitary coverage should not be viewed as technical or economic one ignoring the social and institutional aspects. This study indicates that though safe sanitation coverage has remained very low in rural areas, the situation could be improved if supervised credit for latrine is provided to them.

In addition, social mobilization with an emphasis on self-reliance in a public health intervention may produce results similar to that we have seen in the cases of EPI and family planning programs.

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