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Access to Maternal and Child Health Care Services in Some Selected Rural Areas of Bangladesh

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Abstract

The present study was concerned with Maternal and Child Health (MCH) services in rural areas. Data were collected from 120 women comprising 60 recipients and 60 non-recipients of MCH services by using interview schedule from two unions of Jessore and Jhenidah districts to achieve the objectives of the study. Findings showed that, recipients appeared to be less educated and poorer, also had less educated husbands with less living children. Recipients had better knowledge about the services provided in MCH centers than non-recipients. The recipients mentioned to have inadequate medicine given from the MCH centers. Due to more distance of the center from home and lack of female MBBS doctor, recipients did not go to the centers. Maternal health complications were less who received the services. Recommendation for adequate supply of medicine, more female doctors and service centers, encouraging clients about the benefits of services was made for effective MCH services and to increase health care seeking behavior in rural areas.

Keywords: *MCH service, recipient, non-recipient, pre-natal, post-natal*

Introduction

Providing Maternal and Child Health Care (MCH) services along with improved quality of care is a burning issue of today. In a developing country like Bangladesh maternal and child health problems pose serious threat to the improvement of overall health status of the country and thereby negatively affect the socio-economic development. Although improving, in terms of national average, maternal health status for many Bangladeshi rural women remains poor. A study on safe motherhood programme in Bangladesh assessed that women's low status in society, poor quality of maternity care services, lack of trained providers, low uptake of services by women, as well as infrastructure and administrative difficulties-all contribute to the high rate of maternal deaths (Haque *et al*., 1997).

Antenatal care coverage, especially by a trained provider, has increased over time although remains low, in 2000 only one third of child-bearing women population reported receiving antenatal care from a medically trained person. Only 56% of pregnant women received at least one antenatal care from any

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service provider (Bangladesh demographic and health survey, 2001). According to the Bangladesh demographic and health survey, 2005 almost two in three births are assisted by dais (untrained traditional birth attendants) and one in eleven are assisted by relatives or friends. Only one in ten births in Bangladesh take place in a health facility. Doctors, trained nurses, or midwives assist at the birth of only very few babies' estimates suggest 13% of births. Other midwifery trained health providers assist in another 14%.

Maternal and child health care services in rural area are very important because most of the women and children in rural areas in Bangladesh do not have easy access to maternal and child health care services. Again the disproportionate investment in curative health care most of which is located in urban areas made it both unaffordable and inaccessible to the poor and especially mothers and children. In order to offset these deficiencies, governments have launched maternal and child health care services which focus on maternal and child health, protection and development in the context of Millennium Development Goal (MDG), national primary health care agenda and health for all by the year 2000. From this view point, the present study has been undertaken keeping the following objectives in mind:

- To ascertain the participation of rural people to the maternal and child health care services provided by government and the quality of services rendered in the rural areas;
- To assess the service facilities available at different MCH service centers;
- To study the knowledge, attitude and satisfaction of clients relating to MCH service delivery.

Methodology

A multistage sampling technique was followed in the present study. Firstly Jessore and Jhenidah districts were selected purposively. Then one upazila of each district was randomly selected. Finally, from each selected upazila, one Upazila Health Complex (UHC), one Family Welfare Center (FWC) and one Satellite Clinic (SC) were selected randomly. On the one hand, a list of recipients, was collected from the available records of each UHC, FWC and SC on the women, having at least one child, who visited the respective Mother and Child Health (MCH) care centers during the last 3 months, and 10 recipients from each center were randomly selected. On the other hand, the number of non-recipients interviewed was equal to the number of recipients. The non-recipients were selected following a case control technique controlling for place of residence. The closest neighboring households of the recipients, who had at least one child but did not go to the MCH service centers for any service, were selected. Thus, 120 rural women comprising 60 recipients and 60 non-recipients from 6 centers and localities adjacent to centers constituted the sample for this study during February to March, 2006.

Logistic regressions were estimated to determine the utilization of MCH services and the satisfaction level of the respondent. Utilization of MCH services was the dependent variable for a logistic regression which was dichotomous. It was measured on

independent variables age, education, husband's education, household income, number of living children, distance of MCH center from home, mode of transport available to the MCH center and knowledge about the types of MCH services available. Age, number of living children which were used in the model were absolute number and rest of the independent variables score could range 0 to 1, where 0 indicating unfavorable condition and 1 indicating favorable condition. For another Logistic regression women's opinion about satisfaction level was the dependent variable and it was measured by asking their opinion on independent variables recipient's benefit, reception, waiting time, behavior of clinic personnel and opinion regarding medicine. Thus the opinion for the variables, score of the respondent could range from 0 to 1, where 0 indicating unfavorable opinion, while 1 indicating favorable opinion. The model was estimated using SPSS.

Findings and Discussion

Characteristics of the respondent

Data presented in the Table 1 indicates that the recipients were older than the non-recipients. In case of recipients the majority (36.67%) of the recipients belonged to the age group of 24.01-29 and majority (38.33%) of the non-recipients belonged to the age group of 19.01-24. Recipients appeared to be less educated and poorer but had less educated husbands, inadequate household income and less living children than the non-recipients. Both the recipients and non-recipients majority (40.00 and 36.67%) belonged to the medium family. Majority portion of the respondents with respect to religion was muslim and was alike with actual situation of the country. So, religious faith was not a factor to distinguish acceptors from non-acceptors.

Places of MCH services

In Bangladesh MCH services are provided from Maternal and Child Welfare Center (MCWC), Upazila Health Complex (UHC), Family Welfare Center (FWC) and Satellite Clinics (SC). But MCWC is situated only district level. In government facilities where services are officially available for free, charges are often collected informally (Government of Bangladesh, 1999; Killingsworth *et al*., 1999). Table 2 reveals that 45% respondent mentioned FWC as a MCH service center while nearly 28% of the recipients mentioned UHC and about 27% mentioned SC.

Knowledge of respondents about available MCH services

It is clear from the Table 3 that the recipients appeared to have better knowledge about the types of services available in the MCH center than the non-recipients. Table 3 indicates that nearly 73% of the recipients knew about treatment of general disease while it was mentioned by only 43% of non-recipients; about 53% of recipients knew about nursing of pregnant mothers while only about 27% of non-recipients knew about it. Although recipients were knowledgeable in higher proportions about the types of services than the non-recipients, none of them had complete knowledge. Similar result observed by Ahmed *et al*. (1994).

Table 1. Salient Features of the characteristics of the rural respondents

Characteristics (measurement unit)	Categories	Respondents (%)		χ^2	df	P
		Recipients	Non-recipients			
Age (Years)	15.01-19	8.33	10.00	5.509	6	0.480
	19.01-24	35.00	38.33			
	24.01-29	36.67	35.00			
	29.01-34	8.33	10.00			
	34.01-39	6.67	3.33			
	39.01-44	0.00	1.67			
	44.01-49	5.00	1.67			
	Total	100.00	100.00			
Respondent's Education	No education	58.33	56.67	1.615	3	0.656
	Primary	16.67	16.67			
	Secondary	13.33	18.33			
	Above Secondary	11.67	8.37			
	Total	100.00	100.00			
Husband's Education	No education	51.67	48.33	5.074	3	0.166
	Primary	21.67	13.33			
	Secondary	18.33	26.67			
	Above Secondary	8.33	11.67			
	Total	100.00	100.00			
Family size (Actual number)	Small (upto 3)	23.33	33.33	2.634	2	0.268
	Medium (4-5)	40.00	36.67			
	Large (above 5)	36.67	30.00			
	Total	100.00	100.00			
Household income	Adequate	21.67	26.67	28.686	2	0.001
	Somehow managed	23.33	53.33			
	Inadequate	55.00	20.00			
	Total	100.00	100.00			
Living Children (Number)	1	51.67	40.00	17.557	4	0.002
	2	33.33	28.33			
	3	13.33	18.33			
	4	1.67	11.67			
	Above 4	0.00	1.67			
	Total	100.00	100.00			
Religious faith	Muslims	88.33	86.67	0.046	1	0.831
	Non-Muslims	11.67	13.33			
	Total	100.00	100.00			

Table 2. Distribution of recipients by the places in their locality where MCH services are provided (n = 60)

Places where MCH service centers are located	Recipients (%)
Upazila Health Complex (THC)	28.33
Family Welfare Center (FWC)	45.00
Satellite Clinics (SC)	26.67
Total	100.00

Table 3. Respondent's knowledge about the types of services available at MCH centers

Types of services available	Recipients (%)	Non-recipients (%)
Nursing of pregnant mothers	53.33	26.67
Nursing of neo-natal mothers	21.67	8.33
Nursing of children	28.33	11.67
Vaccination of children	68.33	36.67
Vaccination of pregnant mothers	61.67	31.67
Treatment of general diseases	73.33	43.33
Health education	13.33	6.67
Distribution of FP Methods	63.33	43.33
Nutrition education	16.67	5.00
Preparation of ORS	18.33	6.67
Advice for breast feeding	11.67	3.33
Others	1.67	13.33
N	60	60

Note: Percentage may not sum to 100% because of multiple responses

Respondent attitude about MCH services

Table 4 shows the attitude of recipients and non-recipients about MCH services. It was found that almost all (98%) recipients stated to get benefit from the MCH services. Among them, about 77% benefited by having medicine, about 68% benefited by having vaccination of the child/pregnant mothers, and about 37% benefited by having cheek-up during pregnancy. Only 1.67% of recipients opined that they had not been benefited. On the other hand the important reasons for not visiting the MCH center, as stated by non-recipients, were necessity did not arise (33.33%), medicine is not available (28.33%), Very far from the home (23.33%), treatment is not good (21.66%), and unavailability of female MBBS doctor (18.33%). The minor reasons were objections from the family members and nobody accompanied them.

Table 4. Distribution of recipients by the ways they benefited from MCH centers and reasons for not visiting MCH centers (n = 60)

Background characteristics	Respondents opinion	(%)
	Recipients	
Ways of benefit	Did not benefit	1.67
	Check-up during pregnancy	36.67
	Assistance at the time of delivery	3.33
	Vaccination of the child/pregnant mothers	68.33
	Received medicine	76.67
	Non-recipients	
Reasons for not visiting MCH centers	Necessity did not arise	33.33
	Objections from family members	11.67
	Very far from the home	23.33
	Nobody accompanied them	6.67
	Female MBBS doctor is not available	18.33
	Treatment is not good	21.66
	Medicine is not available	28.33

Note: Percentage may not sum to 100% because of multiple responses

Visits of recipients to the MCH centers

The distribution of the recipients by number of visits, time of their last visit to MCH centers and waiting time to meet FWVs/MAs during last three months is shown in Table 5. About 27% of the recipients visited once, nearly 28% of them visited twice and about 22% of them visited thrice. Their mean number of visit to the MCH centers was 2.88 times. The overwhelming majority of the recipients (68.33%) reported that they had visited the centers within the last one month. However, they had visited the centers on average within one and a half months. On being asked about the waiting time to see the FWVs/MAs, more than 50% of the recipients said that they waited for 30 minutes, while one-fourth of them had to wait for about 45 minutes. The average waiting time was about 40 minutes (Table 5). However, the waiting time appears to be unusually long.

Pre-natal and post-natal care

Proper care during pregnancy and childbirth is important to the health of both the mother and child. Antenatal care is recognized as a major component of comprehensive maternal health care (Carroli *et al*., 2001). Table 6 shows that nearly 35% of recipient who suffered from health problems during pregnancy consulted at MCH service centers like UHC, SCs, FWCs and Rural Dispensaries (RDs). Of the remaining recipients suffering from health problems, about 22% consulted MBBS doctors, followed by consulted village doctors, consulted private clinics and consulted hakim/kabiraj, while about 7% did nothing to get relief for their problems. Highest about 62% of recipients were advised to take T/T injection, followed by advice for regular check-up, advised to take nutritious food and advice to remain neat and clean during pre-natal period. Only 1.67% said that they were

advised that they should be admitted into clinics; perhaps these were very high-risk pregnancies. In post-natal period the most frequently advice/services given were vaccination of child (76.67%), followed by medicine for treatment of child's disease (48.33%), breast feeding the child (33.33%), advice for supplementing food along with breast feeding, and weighing the child.

Table 5. Recipients number of visits, time of their last visit to MCH centers and waiting time to meet FWVs/MAs during last three months

Background characteristics	Items	Recipients (%)
Number of visits (times)	1	26.67
	2	28.33
	3	21.67
	4	6.67
	5	3.33
	6	3.33
	7	3.33
	8 and 9+	6.67
	Total	100.00
	Mean no. of visits	2.88 times
Visited before (month)	1	68.33
	2	21.67
	3	10.00
	Total	100.00
	Mean months	1.42
Waiting time (Minutes)	0-15	3.33
	16-30	51.67
	31-45	26.67
	46-60	8.33
	61-75	5.00
	76-90	3.33
	90+	1.67
	Total	100.00
	Mean waiting time	41.5 minutes

The distribution of the recipients and non-recipients by the persons who assisted them at the delivery of their last child is given in Table 7. The most frequently mentioned persons (51.67) were Dhai/TBA, followed by relatives/neighbors, MBBS doctors, nurse and selves. This is more or less same, for both recipients and non-recipients. This finding collaborates with Bangladesh Maternal Health Services and Maternal Mortality Survey (2002).

Table 6. Recipients measures for overcoming health problems and advice/services taken from MCH centers

Characteristics	Items	Recipients (%)
Measures undertaken	Consultation at Thana Health Complex	8.33
	Consultation at Satellite clinics	3.33
	Consultation at MCWC	16.67
	Consultation at FWC/Rural Dispensary	6.67
	Taking good food	11.67
	Consultation with MBBS doctor	21.66
	Consultation with Hakim/Kabiraj	3.33
	Consultation at Private Clinic	6.67
	Consultation with village Doctor	11.67
	Did nothing	6.67
	Others	3.33
Advices/services taken in pre-natal period	Advice for regular check-up	38.33
	Advice for taking T/T injection	61.67
	Advice for taking nutritious food	21.67
	Advice for safe delivery	6.67
	Advice for admission into clinics	1.67
	Advice for keeping neat and clean	13.33
	Advice for others	18.33
Advice/service taken in post-natal period	Advice for breast feeding	33.33
	Advice for supplementary food along with breast feeding	21.67
	Weigh the child	6.67
	Vaccination of the child	76.67
	Medicine was given for the child's disease	48.33
	Others	6.67

Note: Percentage may not sum to 100% because of multiple responses

Table 7. Person who assisted respondents at he delivery of their last child (n = 601)

Persons who assisted at delivery	Recipients (%)	Non-recipients (%)
Dhai/TBA	51.67	48.33
MBBS Doctor	8.33	11.67
Village Doctor	0.00	0.00
Relatives/neighbors	36.67	33.33
Nurse	3.33	6.67
Others	0.00	0.00
Total	100.00	100.00

Constraints faced by recipients to get MCH services

Table 8 clearly indicates that an overwhelming majority of recipients (36.67%) reported that they did not face any constraints in receiving services from MCH centers. The constraints faced by others were the clinic is far (28.33), followed by more than one visit is required for vaccination /medicine, nobody is there to accompany them, doctors/FWVs are not regularly in attendance, objection from parent–in-law and poor reception by clinic staff with clients. However, all these constraints appeared to be equally important. Similar findings was also obtained by Rahman *et al*. (1994).

Table 8. Recipient's constraints in receiving services from MCH centers (n = 60)

Constraints they faced	Recipients (%)
No constraint was faced	36.67
Objection from parents-in-laws	3.33
Distance is too far	28.33
Nobody was there to accompany them	11.67
Doctors/FWVs were not regularly in attendance	6.67
It was necessary to go more than once for vaccination/medicine	13.33
Clinic staff did not behave well with clients	5.00
Total	100.00

Factors affecting the likelihood of utilization of MCH services

In order to explain the likelihood of utilization of MCH services in the overall socio-economic condition, various factors were used to estimate a logistic regression. Table 9 represents the coefficients and standard errors from binary logistic regression analysis examining the association between selected characteristics and the likelihood that affect utilization of MCH services.

Table 9. Coefficients and standard errors from binary logistic regression analysis

Variable	Co-eff.	S.E	Odds Ratio
Age	-0.119*	0.057	1.126
Education	-1.218*	0.600	3.382
Husband's education	-0.627	0.588	1.872
Income	-0.069	0.606	1.071
Living children	-0.769*	0.372	0.464
Distance from home	1.323*	0.553	3.754
Mode of transport	1.174*	0.553	3.234
Knowledge	2.775**	0.571	16.039
Constant	-4.525**	1.335	16.039
Likelihood Ratio	=	99.413	

** Significant at 5% level, ** Significant at 1% level*

The age of the respondents was significantly negatively related with utilization of MCH services. This suggested that the younger women had the higher chance to utilize MCH services than the older women.

The relationship between education and utilization of MCH services was significant at the five percent level. It was suggested that educated women were less likely to utilize MCH services than the illiterate women because most of the educated women went to private clinic. Odds ratio being 3.382 suggested that the change to receive MCH services for educated women was about three and a half of that illiterate women.

Although husband's education and household income had negative relationship with utilization of MCH services, these negative relationships are statistically insignificant. However, these results indicate that women with educated husbands have less chance to utilize MCH services than those with illiterate husbands and that women with adequate household income were less likely to utilize MCH services than those with inadequate household income.

The relationship between living children and utilization of MCH services was significant at the five percent level. It was suggested that women having less children were more likely to utilize MCH services than the women having more children.

The distance of a woman's residence was significantly positively related with utilization of MCH services. This was suggested that women having a residence within one mile of the MCH centers were more likely to utilize MCH services compared to those having residence more than one mile away. In other words, women residing within one mile of the MCH service center had about four times more chance to receive MCH services than those residing more than one mile away, an odds ratio of 3.754 in the case. Similarly women who could go to an MCH center on foot had more than three times chance of receiving MCH service than those who had to go to MCH centers using other mode or transports such as rickshaw, baby taxi, tempos, buses, boats cars etc. All these were suggested that MCH services were more likely to be utilized if these services can be provided in a place which was within walking distance of clients' houses.

Above all, knowledge about the types of MCH services available in MCH centers was positively related with their utilization. This was suggested that woman having knowledge about the types of services available in the MCH centers were more likely to utilize the services than those without such knowledge.

Factors affecting the likelihood of satisfaction of MCH service recipients

Logistic regression analysis had also been done to find out the factors responsible for satisfaction of women who received services in MCH centers. The result of the logistic regression is given in Table 10 along with significance level, standard error of the estimators and odds ratios.

Satisfaction of recipients appeared to be positive and significantly related with the benefits received by them. Women who made the statement that they benefited from MCH services were more likely to be satisfied than those who reported that they did not benefit from MCH services. Similarly women who received a cordial reception upon arrival at the MCH centers were more likely to be satisfied than those receiving an uncordial reception. In the cases, women who said they had a cordial reception had eight times more chance to be satisfied than those who reported receiving an uncordial reception.

Table 10. Coefficients and standard errors from binary logistic regression analysis

Variable	Co-efficient	S.E	Odds Ratio
Recipients benefit	2.2317*	1.0349	0.1073
Reception	2.1013*	1.0402	8.1771
Waiting time	-1.8725	0.9656	6.5046
Behavior of clinic personnel	4.7597**	1.4812	116.7145
Opinion regarding medicine	2.2886*	0.9768	9.8612
Constant	-5.2093**	1.8212	
Likelihood ratio	=	81.5032	

** Significant at 5% level, ** Significant at 1% level*

It was expected that a longer waiting time to see FWVs/MAs would adversely affected the satisfaction level of recipients. This was reflected in the negative relationship between waiting time and satisfaction level. However, this relationship was statistically insignificant at 5% probability level.

The relationship between satisfaction level and behavior of clinic personnel with recipients was positive and statistically significant at 1% probability level. This suggested that recipients who received a cordial behavior from the clinic personnel were more likely to be satisfied than those receiving an uncordial behavior. However, recipients who received a cordial behavior from the clinic personnel had about hundred seventeen times more chance to be satisfied compared to those receiving an uncordial behavior in the clinic.

Satisfaction level of recipients depended on an adequate supply of medicine to them. This was evident in the very positive relationship between satisfaction level and opinion of recipients about medicine. Odds ratio being 9.8612 suggested that recipients who were given medicine in adequate quantities had 10 times more chance to be satisfied than those who received medicine in inadequate quantities.

Conclusion

The study revealed that the rural areas were more or less ignorant and thus had little idea of access to MCH services. The traditional values and cultural factors kept pregnant women away from utilization of MCH services for preventive and curative purposes. Pregnant women and their children, who visited these centers, did so mainly for treatment of their ailments but not for preventive services. Consequently, the desired and planned improvement in the delivery of MCH services in these centers had not been achieved at an expected level till to-day. Based on findings of this study it is recommended that the government should take effective measures to improve the participation of the rural women in the MCH services. The following suggestions might be effective in this connection.

- Supply of medicine should be increased to cover treatment of common disease of children and pregnant mothers and more female medical doctors could be appointed up to union level to provide quality treatment.

- Patients, particularly the pregnant women be motivated by the FWAs to make follow-up visit according to the schedule given by the service providers, alternatively FWVs must make follow-up visits to those pregnant mothers who fail to make follow-up visits to the clinics as scheduled.
- Service providers should give attention on management of waiting space, including cleanliness of space and reception of clients. Some Aya may be given the responsibility of reception.
- Educational and motivational programme by the MOs, other senior officers and field workers should be geared up to make the target groups and community members, understand the benefits of MCH care, particularly antenatal care, child care, and safe delivery.

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