

Original Article

Status And Utilization Of Maternal Health Care Services In A Selected Rural Area Of Bangladesh

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Abstract

Improvement of maternal health care services is regarded as an important component for achieving targets of MDGs by the year 2015. A cross-sectional community based study was carried out to find out the status and utilization of maternal health care services in Pangsa Upazilla of Rajbari District among 517 mothers who had at least one child up to 1 year of age. The study was conducted from June to August in the year 2008. Data were collected through face-to-face interview using purposive sampling technique. Most of the respondents were in the age group of 20-29 years (69.05%) and 35.01% of them had received primary education. Sixty seven percent of them had average monthly income of Taka 3001-5000. Eighty percent of the respondents were at the age group of 15-19 years when they got married. Most of the mothers (71.57%) got antenatal care during their last pregnancy and more than 80% of them had completed their TT vaccination schedule during pregnancy period. More than 80% of the deliveries were taken place at home. Eighty five percent of the deliveries were normal delivery and most of them (77.76%) were attended by the untrained traditional birth attendants (TBA). Hemorrhage was found to be the highest reported obstetric complication (37.50%). This study offered a picture of the maternal health care services in rural Bangladesh and detected the need for future work in this area.

Key words: Maternal health care service, ante-natal care, delivery, rural area, Bangladesh

Introduction

The state of maternal health in a nation can be characterized by numerous factors, such as outcome measures like maternal mortality and morbidity rates, or process indicators of service availability and use. These indicators include the levels of antenatal and postnatal care, coverage of tetanus toxoid (TT) vaccination, proportion of deliveries conducted in health facilities by trained birth attendants, or proportion of obstetric complications. Unfortunately,

according to many of these measures, the maternal health situation in Bangladesh appears to be poor¹.

The government of Bangladesh has made considerable efforts to provide health and family planning services in the years since the country's independence in 1971, which has resulted in progress in some indicators. However, achievement in the field of maternal health care services is still unsatisfactory. The maternal mortality ratio (3.2 per 1000 live births) and neonatal mortality ratio (37%) are still unacceptably high in Bangladesh^{2,3}. These two important indicators for achievement of MDGs are closely related with maternal health care facilities of the country.

One factor potentially influencing the high MMR is that nearly half (48.8%) of the mothers do not receive antenatal care from a medically trained provider³. Antenatal care from a medically trained provider has increased from 49% in 2004 to 51.2% at present^{3,4}. Still urban-rural differential in antenatal care coverage is large; 71% urban mothers received antenatal care from medical personnel compared with only 46% of rural mothers³. Another important health intervention for reducing maternal mortality is to have mothers deliver with a skilled birth attendant in a health facility⁵.

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However, only 18% births in Bangladesh are attended by skilled attendants like doctors, trained nurses, midwives, paramedics, family welfare visitors (FWV), or community skilled birth attendants (CSBA); where only 15% deliveries occur at a health facility. Again there are significant rural-urban differences, as professionally trained personnel attend 36.7% of births in urban areas, compared to only 13.2% in rural areas and women in urban areas are three times as likely as women in rural areas to give birth in a health facility³.

Among the Millennium Development Goals set in the year 2000 was a three-quarters reduction in maternal and infant mortality rates by the year 2015⁶. Worldwide, an estimated 515,000 women die of causes related to pregnancy and child birth each year, and their deaths leave one million children motherless^{7,8}. Over 99% of these deaths occur in developing countries⁶. Antenatal care and institutional delivery are important interventions for the wellbeing of the pregnant mother and the expected infant, especially in regions where maternal and infant mortality rates are high.

Bangladesh has committed to the Millennium Development Goals (MDGs) and has developed various policies and strategies for improving maternal and newborn health. Bangladesh has made progress in achieving maternal health goals, including MDG 5, with the MMR of 322 maternal deaths per 100,000 live births in 1998-2001². A review of various performance measures in maternal health so far indicates that meeting the MDG 5 goal of lowering the MMR to 143 per 100,000 by 2015 will be a huge challenge for Bangladesh³. To further reduce MMR by this 56% will require better understanding of causes of maternal death, its underlying socio-demographic determinants and developing appropriate strategies.

Materials and Methods

A cross-sectional study was undertaken from June to August 2008 in Pangsra Upazilla of Rajbari District. Mothers who had at least one child up to 1 year of age were taken as respondents in the study. A total of 517 respondents were included using the purposive sampling technique. Verbal informed consent was received from each individual prior to inclusion. Assurance had been given that the confidentiality concerning their information would be maintained strictly. A semi-structured pre-tested questionnaire was developed to collect data from face-to-face interview.

Results

Most of the mothers were in the age group of 20-29

years (69.05%) and 35.01% of them had received primary education, which was followed by secondary education (31.34%). Sixty seven percent of them had average monthly income of Taka 3001-5000.

Table I. Socio-demographic characteristics of the respondents (n = 517)

Characteristics	Number	Percentage	
Age (years)	12-19	63	12.19
	20-24	232	44.87
	25-29	125	24.18
	30-34	74	14.32
	35-39	14	2.70
Educational status	≥ 40	9	1.74
	Illiterate	60	11.61
	Only able to put sign	102	19.73
	Primary	181	35.01
	Secondary	162	31.34
	Higher secondary	7	1.35
Average monthly family income (in Taka)	Graduate & above	1	0.19
	Informal education	4	0.77
	<3000	67	12.96
	3001-5000	349	67.50
>5000	101	19.54	

Eighty percent of the respondents were at the age group of 15-19 years when they got married. Most of them (52.22%) were among the age group of 20-24 years at the time of their last child birth. More than 60% had 1-2 live births.

Table II. Frequency distribution of respondents by personal history (n = 517)

Characteristics	Number	Percentage	
Age at marriage (years)	15-19	417	80.66
	20-24	89	17.21
	25-29	9	1.74
	30-34	2	0.39
Age at last child birth (years)	15-19	144	27.85
	20-24	270	52.22
	25-29	73	14.12
	30-34	28	5.42
	≥35	02	0.39
Number of live births	1-2	324	62.67
	3-4	156	30.17
	5-6	32	6.19
	>6	5	0.98

Most of the mothers (71.57%) got antenatal care (ANC) during their last pregnancy and more than 80% of them had completed their TT vaccination schedule during pregnancy period. Only around 40% of the respondents got their ANC from Upazilla Health Complex (UHC).

Table III. Ante-natal care (ANC) coverage for the mothers (n = 517)

Characteristics	Number	Percentage	
ANC received at last pregnancy	Yes	370	71.57
	No	147	28.43
Vaccination status	Vaccinated	459	88.78
	Not vaccinated	58	11.22
Source of ante-natal care	UHC ^a	202	39.07
	FWC ^b	60	11.61
	Union health centre	18	3.48
	Private MBBS doctors	70	13.54
	Trained TBA ^c	29	5.61
	Untrained TBA ^c	36	6.96
	Others	102	19.73

^aUHC = Upazilla Health Complex, ^bFWC = Family Welfare Centre
^cTBA = Traditional Birth Attendant

More than 80% of the deliveries were taken place at home. Eighty five percent of the deliveries were normal delivery and respondents delivered spontaneously in most of the cases (80.01%). Most of the deliveries (77.76%) were attended by the untrained traditional birth attendants (TBA). Hemorrhage was the highest reported obstetric complication (37.50%).

Table IV. Status of obstetrical services for the mothers (n = 517)

Characteristics		Number	Percentage
Place of delivery	Home delivery	449	86.84
	Hospital	63	12.19
	Others	5	0.97
Mode of delivery	Normal	440	85.11
	Instrumental	17	0.33
	Caesarean Section	60	11.61
Nature of delivery	Spontaneous	414	80.01
	Delayed	55	10.64
	Obstructed	42	8.12
	Others	6	1.16
Birth attendant	Trained TBA ^a	73	14.12
	Untrained TBA ^a	402	77.76
	Qualified doctor	18	3.48
	Nurse	18	3.48
	Others	6	1.16
History of obstetric complications	Eclampsia	42	29.17
	Anemia	48	33.38
	Hemorrhage	54	37.50
	Gestational diabetes	0	0.0

^aTBA = Traditional Birth Attendant

Discussion

This study was conducted among 517 mothers to see the status and utilization of maternal health care services in a selected rural area of Bangladesh. Age range of the respondents correspondent with the other studies conducted among the same population^{9,10}. Most of the respondents (67.89%) had some form of formal education. This rate of women literacy rate clearly more than the 2008 national survey both for national and rural (54.74% and 47.86% respectively), even more than urban rate (66.56%)¹¹. This difference might reflect some selection bias and also might be due to time difference between survey and the current study. Average monthly family income correlated with the per capita income of people of Bangladesh¹².

Mean age at first marriage was found at 2008 national survey as 18.76 years for rural area and 19.74 years for urban area¹⁰. We also found that most of the respondents were at the age group of 15-19 years when they got married. According to Bangladesh Demographic and Health Survey 2007 found approximately 60.3% of women who gave at least one live birth received ANC, 51.2% did so from a skilled provider³. Current study found a better picture that 71.57% of the mothers got ANC during their last pregnancy. But use of public health facility and service from doctors still low compare to other studies^{2,12}. TT vaccination coverage (88.78%) was just a little lower than expected (89.6% in rural and 92.3% in urban area)³.

Delivery care should involve delivery with a skilled attendant, a person who can provide normal delivery care, recognize and manage pregnancy complications when they occur. Institutional delivery is an important option for facing obstetric emergencies, for minimizing maternal and infant mortality and thus to reach the target for MDG. The high perinatal mortality and maternal mortality in Bangladesh may be attributed to the low prevalence of the delivery care. National survey also found that 30.6% deliveries in urban area and only 10.5% of the deliveries in rural area took place in a health facility³. Present study found 86.84% of the deliveries took place at home. Other studies also found almost the same picture^{10,14}. Our study found that 77.76% mothers were attended by the untrained birth attendants and only 3.48% were attended by doctors. This finding was even worse than the national survey report that 26.1% of the urban mothers and 9.2% of the rural mothers were attended by qualified doctors, and 46.2% urban mother and 66.9% rural mothers were delivered by untrained birth attendants. Utilization of trained birth attendants even lower than most of the other study findings^{10,14} except few¹⁵. Interaction of socio-demographic status and existing health care facilities of the particular areas might have played some role for this difference. In this study 11.61% of the deliveries were found to be done through caesarean section, which was found to be 5.4% in rural areas and 15.9% in urban areas. The reason behind the higher caesarean section rate in this study was unclear. Information regarding whether public or private services were used for surgical delivery was not sought in this study. It was a limitation of the current study. Our study found that 80.01% of the delivers were spontaneous and hemorrhage was found as the highest reported obstetric complication (37.50%), which was followed by anemia. Only 29.17% respondents reported eclampsia as obstetric complication. Data from the Matlab surveillance system found that 82% of maternal deaths in Matlab during 1990-2001 directly caused by the major obstetric complications, haemorrhage being the primary culprit (ante-partum haemorrhage [APH] and postpartum haemorrhage contributing 27% together), followed by eclampsia/pre-eclampsia with 23%¹⁶. Findings of the current study might not reflect the actual picture of the current situation of the study population as this study did not attempt to collect mortality data. There also could have some selection bias as mothers who survived the obstetric complications acted as the respondents of the study.

This study had the limitations that it did not look for the factors associated with the status and utilization of

the maternal health care services in the study area. Again as it was conducted in a selected rural area the findings could reflect the socio-demographic status and existing health care facilities of the study area, which might lack external validity. Still this work was an attempt to understand the maternal health care status of rural Bangladesh.

Conclusion

Bangladesh has achieved important health gains over the last decade. However, equivalent progress has not been realized in the area of maternal health especially when rural area is concerned. This study clearly reflected the need for further in depth research to understand the status and pattern of maternal health care services in rural Bangladesh and to find out the factors associated with the utilization or non-utilization of the existing health care facilities in rural areas. Future in depth research may will help the policy makers to formulate plan to meet the targets for MDGs.

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