



International Journal of Medical and All Body Health Research



International Journal of Medical and all body Health Research

ISSN: 2582-8940

Received: 25-05-2021; Accepted: 12-06-2021

www.allmedicaljournal.com

Volume 2; Issue 2; April-June 2021; Page No. 19-24

Factors influencing health care utilization in rural women of Bangladesh

Mohammad Hefzur Rahman¹, Tanjima Begum², Tajnaher Begum³, Jesmin Nur⁴

¹ Emergency Response Manager, Emergency Response to COVID-19 Pandemic Project, Shimantik, Dhaka, Bangladesh

² Senior Research Officer, Department of Epidemiology and Biostatistics, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), Dhaka, Bangladesh

³ Indoor Medical Officer, Upazila Health Complex, Dhamrai, Dhaka, Bangladesh

⁴ Research Officer, Department of Immunology, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM), Dhaka, Bangladesh

Corresponding Author: **Mohammad Hefzur Rahman**

Abstract

Background and objective: Childbearing is one of the most hazardous experiences that, women engage in while introducing a new life to this world. It is often associated with complications that may cause morbidities, disabilities, and mortalities. To identify the important factors which influence the respondent mother regarding not to take the health care utilization in rural area.

Methodology: A cross sectional descriptive study was conducted among 202 women from January 2014 to February 2014. This study included only female of reproductive age (15-49) with at least having one child. For data collection multistage sampling was used. Only 202 reproductive female women were interviewed in the study.

Results: Among 202 participants, most of the respondent mothers were in less than 20 (58.4%) years. 47.5% of the

respondents were from the poorest socioeconomic class. About 54.5% had at least one ANC visit during their last pregnancy. The main reasons did not receive any checkup due to illiteracy. Mother's education had positive significant ($p < 0.001$) effect on maternal health service use. Socioeconomic status ($p < 0.001$) and transport cost also had significant effect on the use of ANC services. Logistic regression analysis showed that, respondents who had secondary-level education were 13.5 times more likely to use ANC adequately compared to those who had no education.

Conclusion: The findings suggested that mother's education keep strong effect on maternal health service use. Household's socioeconomic status, transport cost and other hospital expenditure also influenced the utilization of modern health care services.

Keywords: Ante-natal care, Maternal health care service, Rural area

Introduction

Child bearing is a natural disaster for a woman which is one of the most hazardous experiences while introducing a new life in this world. It is often associated with complications that may cause morbidities, disabilities, and mortalities^[1]. In developing countries, women often suffer serious health risks during pregnancy e.g., eclampsia, anemia, edema, etc. or for their children e.g., pneumonia sepsis and, birth asphyxia and injuries, congenital anomalies, with low birth weight etc.^[2].

The risk of dying during pregnancy and childbirth, many women suffer from short and long-term maternal disabilities and illness. According to WHO (2001) for every maternal death, an estimated 30 to 50 women suffer pregnancy related health problems such as vesico vaginal fistulae, infertility, and depression that can be permanently debilitating^[3]. The World Bank estimates that 74 percent of maternal deaths could be prevent if all women had access to involved and deal with complications of pregnancy and childbirth, especially emergency obstetric care^[4].

There has been growing concern that Bangladesh is facing persistent health crisis, and considerable efforts are being given by the government, NGOs and international communities to improve the poor health condition of the people. Though the maternal mortality rates have declined in recent decades in Bangladesh, the levels are still very high by any standard. The ratio of maternal mortality 170 deaths per 100,000 births^[5]. This means that about 638 women die from pregnancy or childbirth related complications every year more than 21 every day. Moreover, a malnourished mother gives birth low weight baby, a major underlying cause of death for newborns. Bangladesh has one of the world's highest rates of adolescent motherhood, who gives birth before age 20 in every year. 24.6% of adolescent women age^[15-19] are already mothers with at least one child and another 5 % is pregnant^[6]. In national average the number of deaths among adolescent mothers is double. These high mortality rates are underpinned by the fact that 85 percent of women give birth at home, most with unskilled attendants or relatives assistant.

The low socio-economic status of women, poor knowledge and low uptake of services are some of the reasons for this situation.

These complications can be managed and treated if timely and appropriate care is required from facilities with necessary skilled care providers. Bangladesh has made a significant improvement towards achieving the Millennium Development Goal (MDG) target the 5 of 75% reduction in the MMR between 1990 and 2015 [7]. Therefore, this study was to assess the factors that determine the use of ANC services in a selected rural area of Bangladesh.

Methodology

This Cross-sectional descriptive study was conducted in Zakigonj Upazilla in Sylhet district from July'2014-December'2014. The only female respondents whose age 15-49 with at least one child was eligible for this study. For data collection multistage sampling was carried out to assess factors affecting utilization of maternal health care services. First two Union was selected randomly. Then a total of 8 villages (4 from each of the selected Unions) was included in the study randomly. Average number of households in each village are 150, so the total numbers of households in 8 villages are 1200. From these 1200 households, 400 households were selected by the systematic random method. One respondent was interviewed from each household. Only 202 females of reproductive age with at least one child were interviewed in the study.

Statistical Analysis

All continuous variables were presented as mean \pm SD and categorical variables were presented as proportions. The significance of the differences in patterns among values of the associated factors was tested using chi-square test at a 5% level of significance. Odds ratios with 95% confidence interval (CI) were calculated using binary logistic regression model to identify the factors associated with the use of ANC services. All statistical tests were considered significant at a level of $\leq 5\%$. SPSS version 20.0 was used.

Results

Among 202 participants, most of the respondent mothers were in age less than 20 (58.4%). Ninety five percent were house-wives, followed by service holders. 26.2% of the respondents were at age less than 15 years when they got married. 20.3% were illiterate and 41.1% were below five class shown in table1. 47.5% of the respondents were from the poorest socio-economic class, 26.8% were from the middle class, and 25.7% were from the richest class. About 49% husbands of the respondents were illiterate, 18.3% below class five. Secondary and above level educated constituted 32.3% .44.2% of the husband were doing hard work (i.e., farmer, daily worker, rickshaw puller). Rest of them were business person, service holder or doing other works.

Table 1: Socio-demographic characteristics of the respondents

Variables	Frequency	Percentage
Women's Age		
< 20	118	58.4
20-34	69	34.2
≥ 35	15	7.4
Academic qualification		
No education	41	20.3
Primary	83	41.1
Secondary	59	29.2
Higher	19	9.4
Occupation		
Service holder	2	1.0
Teacher	3	1.5
NGO worker	1	0.5
Housewife	192	95.0
Others	4	2.0
Education of Husband		
No education	99	49.0
Primary	37	18.3
Secondary	8	4.0
Higher Secondary	19	9.4
others	39	19.3
Occupation of Husband		
Farmer	33	16.3
Business person	35	17.3
Daily worker	43	21.3
Rickshaw puller	9	4.5
Service holder	21	10.4
Others	61	30.2
Socio-economic status		
Poor	96	47.5
Lower middle	38	18.8

Upper middle	16	7.9
Rich	52	25.7
No of living children		
1	68	33.7
2 – 3	84	41.6
≥ 4	50	24.8
ANC received at last pregnancy		
Yes	110	54.5
No	92	45.5
Vaccination Status		
Vaccinated	112	55.4
Not vaccinated	90	44.6
Source of anti-natal care		15.8
UHC*	32	6.0
FPO*	12	10.4
Satellite Clinic	21	9.9
Doctor's Chamber	20	57.9
Traditional care	117	
Finished all ANC check-up in last pregnancy		
Yes	82	40.6
No	120	59.4
Not receiving any check up		
Too far and expensive	85	72.66
Could not get permission	21	17.94
Religious region	11	9.40

About 54.5% took antenatal care (ANC) during their last pregnancy and more than 55.4% of them had completed their TT vaccination schedule during pregnancy period. 15.8% had received services from the government hospitals, 6.0% from the community clinics and 20.3% from the local clinics and doctors' chamber. A big part of the respondents (57.9%) takes traditional care from home. 40.6% finished all antenatal check-up during their last pregnancies.

Women who did not take antenatal services during pregnancies were asked why they not receiving any check-up and their reasons were as follows: too far and expensive (72.66%), could not get permission from their family 21 (17.94%) and religious reason 11 (9.40%). Though 54.5% received antenatal check-up during pregnancy, most of the

mother (85.6%) had given birth at home. 92.6% had normal delivery and 86.6% was alive. 72.8% had no complications. Association between ANC and other related demographic variables (n-202) were shown in table 3. The results from bivariate analysis suggested that younger women were more enthusiastic to seek antenatal check-up (62.7% vs 37.3%, $p < 0.05$) than older women. We observed that mother's education ($p < 0.001$), income ($p < 0.001$) appeared to be associated positively with treatment received. There is significant relationship between outcome of the baby and received ANC. Those mother who had received ANC service they had birth less death baby than not receiving ANC (29.6% Vs 70.4%, $p < 0.005$).

Table 2: Status of obstetrical services for the mother

Variables	Frequency	Percentage
Place of Birth		
Home delivery	173	85.6
Health complex	12	5.9
Tertiary hospital	17	8.4
Mode of delivery		
Normal vaginal	187	92.6
Instrumental	1	0.5
C-section	14	6.9
Complications		
Excessive bleeding	3	1.48
Abnormal Presentation	9	4.45
Prolonged labor	16	7.92
Premature water breaking	27	13.37
No complication	147	72.78
Nature of delivery		
Live birth	175	86.6
Still birth	18	8.9
Abortion	9	4.5

Table 3: Association between ANC and other related demographic variables (n-202)

Variables	Treatment received		P value
	Yes	No	
Age			0.000
< 20	62.7	37.3	
20-34	52.2	47.8	
≥ 35	0.0	100.0	
Woman Education			0.000
No education	24.4	75.6	
Literate	62.1	37.9	
Husband Education			0.165
No education	49.5	50.5	
literate	59.2	40.8	
Socio- economic status			0.000
Poor	38.5	61.5	
Middle	71.1	28.9	
Upper Middle	56.2	43.8	
Rich	71.2	28.8	
Not receiving any check up			0.000
Too far and expansive			
Yes	29.1	70.9	
No	73.3	26.7	
Outcome of the baby			0.005
Live birth	58.3	41.7	
Death	29.6	70.4	
Abortion			0.004
Yes	56.8	43.2	
No	10.0	90.0	

P after chi-square test, $P < 0.05$

χ^2 -test was used. *The level of significance at $\alpha=0.05$

Table 4: Logistic regression analysis considering antenatal care as dependent variable (n-202)

Independent variables	P value	Exp(B)	95% C.I.	
			Lower	Upper
Age				
≥ 20	0.006	1	1.267	3.969
< 20		2.242		
Education				
No		1		
Primary	0.024	2.618	1.138	6.024
Secondary	0.000	13.527	5.137	35.618
Higher Secondary	0.001	8.680	2.499	30.158
Education of Husband				
No		1		
Primary	0.025	2.495	1.120	5.55
Secondary	0.000	7.919	2.842	22.07
Higher Secondary	0.022	7.636	1.333	43.75
Above	0.000	13.576	3.292	55.97
Income				
Poor		1		
Middle	0.000	3.914	1.737	8.822
Upper Middle	0.188	2.050	0.703	5.976
Rich	0.000	3.933	1.901	8.139
Not receiving any check up				
Too far and expansive				
No		1		
Yes	0.000	6.690	3.595	12.450
Outcome of the baby				
Death		1		
Live birth	0.007	3.32	1.38	7.99
Abortion				
Yes		1		
No	0.020	11.82	1.47	95.14

In Binary logistic regression analysis ANC considered as a dependent variable. After adjusting the other factors; respondents who had secondary-level education were 13.5 times more likely to use ANC adequately compared to those who had no education. Husband's education is also important reason to use ANC effectively for women. It is notated those 13 times more likely to use ANC whose husbands are above higher secondary level. The model suggests that socio economic status ($p < 0.001$) and transport cost ($p < 0.001$) were the important correlates of ANC during pregnancy.

Discussion

A total of 202 women were included in the study. Present study found 85.6% of the deliveries took place at home. Other studies of Bangladesh also found almost the same picture [14, 15, 16]. 54.5% had received any check-up at ANC visit. 40.6% finished all ANC check-up in Last pregnancy. This is consistent with the research paper Madhupur upazila in Tangail district of Bangladesh where 55% of the mothers had at least one or two visits, and 45% had the recommended four and above ANC visits [17]. The findings from BDHS 2011 in which 55% of mothers received at least one ANC during their entire period of pregnancy. The result differs from Eastern Hararghe Zone in Ethiopia where 34% of mother received ANC from skilled providers for their recent births [18]. From our study it has revealed that mother's education and household wealth have a significant effect on utilization of maternal health services. Mother's education is an important factor for developing a good family. An educated mother has sufficient knowledge about the importance of maternal healthcare facilities [19]. Several study results have strongly supported that there is a positive influence of mother's education on maternal health service utilization [17, 20-22], which is consistent with our study.

This study has revealed that household wealth is significantly associated with the utilization of health services. Women from families in good economic condition were more likely to use ANC services compared to those with a lower family income. This is similar with most of the other findings [17, 23-25]. Transport cost also strongly related to maternal health care services utilization. This result is consistent with other studies [1].

There were some limitations in our study. The study carried out among female only in a rural area, so the results could reflect the health and socio economic status of that study area, it differs between other responds of urban area. Data collected by face-to-face interview, so that participants embarrassed to talk about pregnancy and delivery out come as well as care seeking behaviors.

Conclusion

Illiteracy is one of the most important factors for influencing health care utilization in upazilla health complex. The findings indicate that formal education and wealth index was important factors for using ANC services. Transport cost and other hospital expenditure, sometimes do not get permission from husband residing aboard were some of the important factors that affect maternal health care utilization in the study.

Recommendations

Women education holds a net effect on maternal health service use. Improving education of women and girls and take suitable package of maternal health services could be an appropriate strategy to utilization of maternal health care

services. Lacks of awareness about the dangers associated with pregnancy and childbirth and the feeling that labor is easy at home and forbidden from their husband or family to go to health institutions for delivery were some of the factors that affect maternal health care services. In this situation, the governmental and nongovernmental organizations need to afford in this problem. The health workers could be taught the negative effects of these approaches through mobilization activities. The government should ensure sufficient funding for the primary health centers and make health reachable to everyone at the grass root level. Further studies need to conduct which will help the policy makers to take proper decision.

Conflict of Interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

Acknowledgment

We are thankful to the postnatal mothers of the Zakigonj Upazilla in Sylhet district who took part in this study. Our special thanks go to our sir Prof. Dr. M. A. Bari, Chairperson, Dept. of Public Health, ASA University for encouraging me to do this research work.

References

1. Ayele DZ, Belayihun B, Teji K, Ayana DA. Factors Affecting Utilization of Maternal Health Care Services in Kombolcha District, Eastern Hararghe Zone, Oromia Regional State, Eastern Ethiopia. *International Scholarly Research Notices*. 2014, 917058.
2. WHO. Maternal mortality in: Estimates developed by WHO, UNICEF, UNFPA and the World Bank. Geneva: World Health Organization, 2005-2007.
3. WHO, Maternal Mortality in: Estimates Developed by WHO, UNICEF, UNFPA and the World Bank, WHO, Geneva, Switzerland, 1995-2001.
4. A Wagstaff, M Claeson. The Millennium Development Goals for Health: Rising to the Challenges, World Bank, Washington, DC, USA, 2004.
5. World Health Organization. Success factors for women's and children's health: Bangladesh, 2015.
6. Islam MM, Islam MK, Hasan MS, Hossain MB. Adolescent motherhood in Bangladesh: Trends and determinants. *PLoS ONE*. 2017; 12(11):e0188294.
7. WHO, UNICEF, UNFPA, and the World Bank. Trends in Maternal Mortality. 1990 to 2008. Estimated Developed by WHO, UNICEF, UNFPA, and the World Bank. Geneva: World Health Organization, 2010
8. R Islam, M Rahman, G Sadhya, NU Ahmed, SK Biswas, FA Hossain, *et al*. Status And Utilization of Maternal Health Care Services in A Selected Rural Area of Bangladesh. *Faridpur Med. Coll. J*. 2010; 5(1):17-20.
9. Barnett S, Azad K, Barua S, Mridha M, Abrar M, Rego A, *et al*. Maternal and Newborn-care Practices during Pregnancy, Childbirth, and the Postnatal Period: A Comparison in Three Rural Districts in Bangladesh. *J Health Popul Nutr*. 2006; 24(4):394-402.
10. Rahman KM, Sarkar P. Levels and Differentials of Maternal Health Care Utilization in Bangladesh. *Research Journal of Medical Sciences*. 2009; 3(4):163-169.
11. Shahjahan Md, Chowdhury HA, Akter J, Afroz Rahman MM, Hafez MA: Factors associated with use of antenatal

- care services in a rural area of Bangladesh; South East Asia Journal of Public Health. 2012; 2(2):61-66.
12. Central Statistical Agency [Ethiopia] and ICF International, Ethiopia Demographic and Health Survey 2011, Central Statistical Agency and ICF International, Addis Ababa, Ethiopia, 2012.
 13. Tarekegn SM, Lieberman LS, Giedraitis V. Determinants of maternal health service utilization in Ethiopia: analysis of the 2011 Ethiopian Demographic and Health Survey. BMC pregnancy and childbirth. 2014; 14(1):161.
 14. Thaddeus S, Maine D. Too far to walk: maternal mortality in context. Social science & medicine. 1994; 38(8):1091-1110.
 15. Ahmed S, Creanga AA, Gillespie DG, Tsui AO. Economic status, education and empowerment: implications for maternal health service utilization in developing countries. PloS one. 2010; 5(6):e11190.
 16. Mengesha ZB, Biks GA, Ayele TA, Tessema GA, Koye DN. Determinants of skilled attendance for delivery in Northwest Ethiopia: a community based nested case control study. BMC Public Health. 2013; 13(1):130.
 17. Erlindawati, Chompikul J, Isaranurug S. Factors related to the utilization of antenatal care services among pregnant women at health centers in Aceh Besar district, Nanggroe Aceh Darussalam prov-ince, Indonesia. J Public Health Dev. 2008; 6:99-108.
 18. Rahman M, Islam R, Rahman M. Antenatal care seeking behaviour among slum mothers. A Study of Rajshahi City Corporation, Bangladesh. SQU Med J. 2010; 10:50-6.
 19. Kavitha N, Audinarayana N. Utilisation and determinants of selected MCH Care services in rural areas of Tamil Nadu. Health Popul-Per-spect Issues 1997; 20:112-25.