Pakistan Journal of Social Sciences 5 (6): 612-619, 2008
ISSN: 1683-8831

Mother's Health Seeking Behaviour at Rajshahi District

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Abstract: The study based on primary data collected from Rajshahi District. The aim of this study is to identify the factors related with the utilization of mother's health seeking behavior in Rajshahi. ANC, delivery care, taking Iron tablet, TT injection and Vitamin-A were considered here as utilization of services. This study revealed that fifty percent women were working and more than 50% (61.1%) gave birth in their middle aged (20-34 years). ANC services were very poor during pregnancy time. Logistic regression technique was employed to detect the significant factors for utilization of services. The important significant factors are: Mother's age, residence, education, economic standard of family, contraceptive use, mass media exposure and visits of health worker. The interesting findings showed that access to delivery in hospital/clinic are very poor. Urban and high economic standard mothers were more likely to utilize services than their rural and low economic standard. This study will help policy makers to take initiative for rural vulnerable mothers.

Key words: Health seeking behaiour, mother age, socio-economic variables, Rajshahi district

INTRODUCTION

Maternal health is now a day's very interesting topic for population Researchers and has gained widespread attention from the global leaders. To day about 529000 women die every year from complication with pregnancy and child birth and that most of these occur in developing countries (WHO, 2005). Child bearing is still the leading cause of death and disease in women of reproductive age in developing countries. It is essential that between 30-40% of the approximately 180 million women who are pregnant annually in the world, or regularly 54 million women, report some kind of pregnancy related morbidity annually. Of these, it is estimated that about 15 million a year develop relatively long-term disabilities deriving from complication (Menken and Rahman, 2001).

From a study in Bangladesh, Khan *et al.* (1986) exhibited that, maternal mortality of the country accounts for about a-third of total female deaths. Though, there has been steady decline in maternal mortality rate over past decade, with present maternal mortality rate of 4.26 per 1000 live births, the level is considered one of the highest in the world. Considering the alarming situation of maternal health, Bangladesh as a member of World Health Organization (WHO) and as a signatory of the Alma-Ata declaration; 1997, is committed to achieve Health for All through implementing an integrated Health and Population Sector Programme (HPSP). Bangladesh has also adopted Millennium declaration 2000 and is resolved at reducing the maternal mortality ratio by three-quarters by the year 2015 (MDG-5), through improving the maternal health status by increasing the level of maternal health service utilization. The government of Bangladesh, since the independence in 1971, has been investing substantially in the institution building and strengthening of health and family planning services in the country, giving special attention to the vast population that resides in the rural areas. Some of the government led health programmes are Primary Health Care (PHC) Services, Maternal and Child Health and Family Planning (MCH-FP) Services, etc. (Islam, 2003). Despite of considerable efforts of the government, the use of the health services has not yet been reached at desired level. Reports from the government as well as private sources indicate that primary health care facilities are greatly under-utilized despite of the tremendous health needs and repeated efforts by the government to improve these services (PRICOR, 1987). A recent study shows that only a negligible proportion of women use the Family Welfare Centre (FWC) or Satellite Clinic (SC) for antenatal care (ANC) (Khanum *et al.*, 1996). Home deliveries are also universal in Bangladesh (95%) and only 8% deliveries are attended by medically trained personnel (Mitra *et al.*, 1997). According to BDHS (2004), only about 56% of last births, in the five years preceding the survey received at least one antenatal care from a provider (trained or untrained) while 48% received the care medically trained provider like doctors, nurses or mid-wives. Only 10% of

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births had taken place at health facility (BDHS, 2004). In Bangladesh, fewer than half (45%) of mothers are acutely malnourished (BMI<18.5).

Bangladesh is a poor country of South-Asian region. For administrative purposes, the country is divided in 6 divisions. Among these, Rajshahi is one of the least developed divisional districts, which is situated in the north corner of Bangladesh. The economy of Rajshahi is based on agriculture. Rajshahi is one of the densest (3968 per km^2, Population Census, 2001) regions of the country. Poor economy of the region is accompanied by poor literacy rate, which is 37.6% for male and 23.2% for female (Population Census, 2001). The level of maternal health service utilization at Rajshahi division has not yet been satisfactory. Only 59.1% mothers of this region received any Antenatal Care (ANC). Mothers in Rajshahi division are least likely to receive Antenatal Care from a qualified doctor (25.9% received ANC from qualified doctors) as compared with other divisions of the country (BDHS, 2004). Proportion of births, that delivered at a health facility is very low (9%, BDHS, 2004). Mother's nutritional status at Rajshahi is also very low. About 48.4% of the mothers of Rajshahi are acutely malnourished (BMI<18.5) (BDHS, 2004). Maternal health care service utilization is essential for further improvement of maternal and child health. The reasons for low utilization rate of mother's health care services should immediately be explored. Though the maternal health condition at Rajshahi is one of the worst in the country, a little is known about the magnitude of the use and factors influencing the use of these services at Rajshahi.

The purpose of this study is to examine the current status and pattern of utilization of maternal health care services at Rajshahi by elucidating the various factors influencing the use of these services in the region.

In our study will help to improve policy-maker's understanding of the determinants of maternal and child mortality and morbidity and serve as an important tool for any possible intervention aimed at improving the low use of maternity-care services in this region.

MATERIALS AND METHODS

Data for this study was drawn from a survey, conducted under the authority of Department of Population Science and Human Resource Development of Rajshahi University. The financial assistance for the survey was provided by UNFPA under the project of Strengthening the Department of Population Science and Human Resource Development. The survey was carried out in one urban and one rural area of Rajshahi between June and July of 2004. In the survey, a total of 4500 data was collected. The urban and rural area was selected on the basis of the density and modern facilities available in the region. Rajshahi Metropolitan City was considered as urban and one upazila (sub-district) of Rajshahi district, Mohanpur was selected as rural. For the purpose of data collection, the urban area was divided into its 39 wards and the rural area was dissected into its 6 union parishads. From each area, 2250 ever married women of reproductive age were interviewed by means of a stratified sampling design with probability proportional to the size of the strata. For both the areas, the voter list of Bangladesh national election, 2001 was used as the sampling frame. The unit of analysis for this study is women who had at least one live birth in the five years preceding the survey. If women had more than one live birth in the past five years, only service received for the most recent birth was considered. A total of 3956 women were found to give at least one live birth in five years preceding the survey. In the survey, only one questionnaire was used for interview, the questionnaire was designated for the married women only. The necessary information on health service utilization and background characteristics were collected by asking questions to the sampled women.

Multiple logistic regression model: The logistic regression model can be applied to identify the risk factors as well as to predict the probability of success e.g. probability of developing a disease as a function of the particular risk factors. This probability can serve as an index of risk for a given disease or for not responding to certain treatment. The logistic regression has become the standard method for finding the relationship between the qualitative outcome variables and a set of explanatory variables. Then the logit transformation is defined to be

$$z_i = \log it(p_i) = \log\left(\frac{p_i}{1-p_i}\right) = x_i\beta$$

where, β is regression coefficient and this equation is known as the logit model that relates the independent variables to the transformation of. Taking these probabilities (p and 1-p) as the basis p_i of analysis, some functions are considered that transforms the scale (0, 1) for the probabilities on to the real line. This function is known as link functions or response function. The logit model for ELLP may be written as:

$$\log it(p_i) = \log[p_i/(1-p_i)] = X_i\beta$$
$$= \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki}$$

Where

$$p_i = \Pr(Y_i = 1|x_i) = [1 + \exp(X_i\beta)]^{-1}\exp(X_i\beta)$$

Table 1: Percentage of the women by some selected background characteristics, Rajshahi, 2004

Characteristics	Number	Percentage
Women's education		
No education	1175	29.7
Primary	2321	58.7
Secondary and higher	460	11.6
Husband's education		
No education	863	21.8
Primary	1086	27.5
Secondary and higher	2007	50.7
Women's work status		
Working	1936	48.9
Non-working	2020	51.1
Residence		
Urban	1977	49.9
Rural	1979	50.1
Women's age at delivery		
<20	811	20.5
20-34	2419	61.1
35+	726	18.4
Economic standard of the household		
Low	1569	39.7
Medium	1713	43.3
High	674	17
Having television/radio		
No	1258	31.8
Yes	2698	68.2
Total	3956	100

Source: Rajshahi and Mohanpur field data, 2004

Measurement of the Variables: To study the level pattern and determinants of utilization maternal health care services, five outcome variables were considered, these are: (i) Antenatal care (ANC), (ii) Place of delivery, (iii) Iron Tablet, (vi) Vitamin tablet and (v) Tetanus (TT) injection. The women were classified into three groups on the basis of the ANC received, viz., those who received three or more ANC; those with no care and any other. Here place of delivery was included as an indictor of whether the birth took place at a health facility. Place of delivery is classified into two groups: Hospital/Clinic and Home. Besides these, they were also asked if they taken various medicines (iron tablet, vitamin tablet and TT injection) essential for good maintenance of pregnancy. The independent predictors of mother's health care service utilization included are mother's age at delivery, birth order, mother's education, husband's education, residence, ever used any contraceptive, mother's work status, visit of health worker, economic standard of the house hold and possession of radio or television. No direct data on household income and expenditure per se were used to classify the economic standard of the people, as the poor are always likely to exaggerate their income and expenditure. A reverse tendency is also observed among the rich. So an index for economic standard of living was computed following the model used.

The differences in the socio-demographic characteristics of the sample women are shown in Table 1. More than half (58.7%) of the women were completed primary education. Percentage of the women with secondary education and higher was very low (11.6%), while 20.5% women had no education. Among the husbands of the women, 50.7% were with secondary education and higher and 21.8% of them were with no education. About 48.9% of the sample women were involved in some sort of income generating activities. Among the sample women, 49.9% were resided in urban area. A sizeable proportion of the women was found to give at a very young age. More than one fifth (20.5%) of the women were found less than 20 years old at the time of the delivery and 61.1% were found to give birth between ages 20-24 years. The percentage of the households with moderate economic standard was 43.3 and 39.7% of the households were with low economic standard. A vast majority (68.2%) of the households had either a television or a radio.

RESULTS AND DISCUSSION

Level and Pattern of Mother's Health Service Utilization: A cohort effect may also be operating, since generally older women tend to have lower educational levels due to lower availability of educational services in the past (Islam, 2003). This deserves special attention of the government. A well integrated health campaign and educational program can be launched among the older women to solve the problem. Table 2 presents the percentage of the mothers received ANC by selected characteristics, during their most recent pregnancy in five years preceding the survey. The result shows that a large proportion (53.8%) of women do not receive ANC at Rajshahi. About one third (34.8%) of the mothers were received ANC 1-2 times and only 11.4% received ANC 3 times and above. Table 2 indicates that, with few exceptions, percentage of mothers, who received ANC, decreases with the incrase in the age at delivery. Highest proportion of mothers received 1-2 and 3^+ ANC were observed in the age group less than 20 years (23.0%) and 20-34 years (6.3%) respectively, whereas the lowest was observed for the age group 35 years and above. Utilization of ANC was also observed to decrease with the increase in the birth order. Highest proportion of mothers received ANC 1-2 and 3^+ times were with order 1 and the lowest was for the birth order four and higher. Table 2 shows that, there is a positive relationship with education of mother and her husband and ANC received. Result indicates that, with the increase in the education of mother and her husband, level of ANC utilization increases linearly. Utilization of ANC was much more lower among the rural mothers. Mothers who ever used any contraceptive are more likely to receive ANC than those who never used any contraceptive. Working mothers are more likely to utilize ANC than the non-working mothers. Visit of health worker is positively associated utilization of ANC. Mothers who are

Table 2: Percentages of the mothers received antenatal care by some selected characteristics, during their last pregnancy, Rajshahi, 2004

Characteristics	Antenatal care (ANC) received None	2-Jan	3+	Number of Births
Mother's age at delivery* **				
<20	70.7	23	6.3	1268
20-34	72.1	21.2	6.7	2470
35+	77.8	18.7	3.5	218
Birth order* **				
1	39.1	44.5	16.4	943
3-Feb	53.3	33.1	13.6	1910
4+	66.7	29.9	3.4	1103
Mother's education* **				
No education	73	19.6	7.3	1049
Primary	66.9	21.6	11.5	2352
Secondary and higher	36.7	44.6	18.7	555
Husband's education* **				
No education	76.4	17.6	6	1012
Primary	65.9	25.3	8.8	1001
Secondary and higher	35.8	48.6	15.6	1943
Residence* **				
Urban	32.1	53.5	14.4	1977
Rural	75.5	16	8.5	1979
Ever used any contraceptive* **				
No	78.4	17.9	3.7	1570
Yes	23.2	60.3	16.5	2386
Mother's work status* **				
Working	38.1	46.8	15.1	216
Non-working	54.5	34.1	11.4	3740
Visit of health worker* **				
Regular	26.2	57.1	16.7	1984
Irregular	58.5	25.3	16.2	580
No	75.8	21.8	2.4	1392
Economic standard of the household* **				
Low	72.2	19.5	8.3	2198
Medium	41.2	44.6	14.2	1082
High	15.5	68.5	16	676
Having television/radio				
No	74.3	20.9	3	1258
Yes	62	26.1	10.2	2698
Total	53.8	34.8	11.4	3956

Source: Rajshahi and Mohanpur field data, 2004; *** = p<0.001

Table 3: Percentages of the mothers attended hospital or clinic, during the delivery of their last pregnancy, Rajshahi, 2004

Characteristics	Delivery at hospital/ clinic (in percentage)	Number of Births
Mother's age at delivery* **		
<20	8.5	1268
20-34	5.8	2470
35+	7.7	218
Birth order* **		
1	8	943
3-Feb	6.2	1910
4+	3.5	1103
Mother's education* **		
No education	1.6	1049
Primary	4.3	2352
Secondary and higher	17.5	555
Husband's education* **		
No education	1.1	1012
Primary	3.9	1001
Secondary and higher	15.2	1943
Residence* **		
Urban	12.6	1977
Rural	2.9	1979
Ever used any contraceptive* **		
No	3.2	1570
Yes	7.6	2386
Mother's work status* **		
Working	4.3	216
Non-working	7.2	3740
Visit of health worker* **		
Regular	10.2	1984
Irregular	6.8	580
No	2	1392
Economic standard of the household* **		
Low	1.9	2198
Medium	7.3	1082
High	11.4	676
Having television/radio		
No	1.8	1258
Yes	4.7	2698
Total	9.05	3956

Source: Rajshahi and Mohanpur field data, 2004; *** = p<0.001

visited regularly by health workers are more likely to use ANC than those who are visited irregularly and not at all. Similarly those who are visited irregularly are more likely to use ANC than those who are not visited at all. Proportion of mothers, received ANC, were lower for those who were with low economic standard and that increases with the increase in the economic standard of households. Those having television or radio are more likely to utilize ANC than those who do not have television or radio.

In this study, the finding of a strong educational effect is consistent with the findings of other studies (Addai, 1998; 2000; Beker *et al*., 1993; Celik and Hotchkiss, 2000). There are a number of explanations for why education is a key determinant of use of health services. Education is likely to enhance female autonomy so that women develop greater confidence and capabilities to make decisions regarding their own health (Caldwell, 1981; Raghupathi, 1996). It is also likely that educated women seek out higher-quality services and have greater ability to use health care inputs to produce better care (Celik and Hotchkiss, 2000). Table 3 represents the percentage of mothers, who went to hospital or clinic for delivery of their pregnancy. A vast majority of the mothers (90.95%) were found to give birth out of health facility. Table 3 shows that, 1 of every 11 women went to hospital or clinic for delivery of their pregnancy at Rajshahi. Highest proportion of mothers (8.5%) went to hospital or clinic were aged less than 20 years and it was lower for the age group 20-24 years and it again increases for ages 35 years and above. Proportion of mothers, went to hospital or clinic, increases with the decrease in the birth order. Percentage of mothers, given birth at a health facility increases with the increase in the education of mothers and her husband. Rural mothers are less likely to come at hospital or clinic for their delivery than the urban mothers. Mothers who ever used any contraceptive are more likely to give birth at health facility than those who never used any contraceptive. Working mothers are

Table 4: Percentages of the mothers who had taken Iron tablet, Vitamin tablet and TT injection by some selected characteristics, during their last pregnancy, Rajshahi, 2004

	Drug utilization during pregnancy			
Characteristics	Iron tablet	Vitamin tablet	TT injection	Number of births
Mother's age at delivery* **				
<20	51.5	77.9	85.1	1268
20-34	38.1	63.2	73	2470
35+	19.3	58	69.3	218
Birth Order* **				
1	55.5	69.5	84.9	943
3-Feb	46.4	62.7	79	1910
4+	20	60.7	66.7	1103
Mother's education* **				
No education	35.9	50.1	71.1	1049
Primary	40.8	68.5	76.6	2352
Secondary and higher	64.5	69.2	89.7	555
Husband's education* **				
No education	33.6	51	72.3	1012
Primary	47.7	61.7	74.2	1001
Secondary and higher	49.5	71.4	80.8	1943
Residence* **				
Urban	59.6	68.3	80.6	1977
Rural	22.8	59.2	73.3	1979
Ever used any contraceptive* **				
No	11.3	61.1	71.5	1570
Yes	60.9	67.8	80.6	2386
Mother's work status * **				
Working	29.2	63.2	70.8	216
Non-working	41.9	73.1	77.3	3740
Visit of health worker* **				
Regular	58.8	68.6	84.3	1984
Irregular	49.8	64	73.3	580
No	12.6	51.2	60.7	1392
Economic standard of the household* **				
Low	20.6	57.7	74.6	2198
Medium	30.3	65	76.5	1082
High	53	81.5	82.2	676
Having television/radio				
No	29.6	57.4	74.8	1258
Yes	52.3	70.4	79.3	2698
Total	41.2	63.8	77	3956

Source: Rajshahi and Mohanpur field data, 2004; *** = p<0.001

less likely to come hospital or clinic to give birth than those of the non-working mothers. Mothers, who are visited regularly by a health worker, are more likely to come at hospital or clinic for delivery, than those who are visited irregularly or not at all. Proportion of mothers, who went to hospital or clinic for delivery, was lowest (1.9%) for those with low economic standard and was highest for high economic standard. Mothers having television or radio are more likely to give birth at a health facility than the others.

The finding reveals that, working mothers are more likely to use ANC services. This finding suggests that earning capacity could contribute to the use of ANC services by empowering women inside and outside the household (Mencher, 1988). Further, women's work in the developing countries is largely poverty induced and is likely to have a negative impact on the utilization of maternal health care services (Sonalde and Devaki, 1994). Mass media interventions are very important to create reproductive health knowledge among the cross sectional people (Thapa and Mishra, 2003). Studies have shown that, exposure to mass media promotes health-related behaviour including contraceptive use and reproductive preferences and treatment for children (Bankole and Westoff, 1996; Retherford and Mishra, 1997). Table 4 presents the percentage of the women who had taken Iron tablet, Vitamin tablet and Tetanus (TT) injection during pregnancy of their last birth by some selected characteristics. Among the total women, only 41.2, 63.8 and 77.0% are found to take Iron tablet, Vitamin tablet and TT injection respectively. Table 4 indicates that, with the increase in the age of mother at delivery and birth order, use of such drugs decreases. Utilization of these drugs increases with the increase in the education of mothers and their husbands. There exists a marked regional variation in the utilization of these medicines. Those who ever used any contraceptive are more likely to take these drugs than those who never used any contraceptive. Prevalence of these medicines was lower among the working mothers than the non-working mothers. Mothers who are regularly visited by the health workers are more likely to receive these medicines than the others. The prevalence of these medicines were higher among those with better economic standard and having television or radio.

Logistic regression analysis: The logistic regression analysis is aimed at identifying the important contribution of variables that have an influence on mother's health service utilization. A variable is considered significantly associated with mother's health service utilization when its p-value was below 0.05. The results of the analyses are shown in Table 5, 6 and 7. The analysis indicates that, all the variables, viz., mother's age at delivery, birth order, mother's education, husband's education, residence, contraceptive use status, mother's work status, visit of health worker, economic standard of the household and television/radio possession are significantly associated with ANC, place of delivery and utilization of essential drugs during pregnancy.

Result shows that, mother's with secondary and higher education are 2.3 times more likely to receive ANC 1-2 times and 2.6 times more likely to receive ANC 3 times and higher than those who had no education. Urban mothers received much more higher odds of utilizing ANC than the rural mothers. Mothers who ever used any contraceptive received 4.5 times higher odds of utilizing ANC 3 times and higher than for the mothers who never used any contraceptive. The odds of using ANC 3 times

Table 5: Multivariate logistic regression estimates of Relative Odds of receiving 1-2 and 3+ antenatal cares (ANC)

Characteristics	Relative odds: Received 1-2 ANC (RC = None)	Relative odds: Received 3+ ANC (RC = None)
Mother's age at delivery		
35+ (RC)	1.0000	1.000
20-34	1.2667 *	1.8143**
<20	1.3778**	1.8000**
Birth order		
4+ (RC)	1.000	1.0000
3-Feb	1.2379*	3.803***
1	1.5172**	4.8235***
Mother's education		
No education (RC)	1.0000	1.0000
Primary	1.3450*	1.5753**
Secondary and higher	2.3157***	2.5616***
Husband's education		
No education (RC)	1.0000	1.0000
Primary	1.4705**	1.4667**
Secondary and higher	2.8235***	2.6000***
Residence		
Rural (RC)	1.0000	1.0000
Urban	2.8035***	1.6941**
Ever used any contraceptive		
No (RC)	1.0000	1.0000
Yes	3.3687***	4.4594***
Mother's work status		
Non-working (RC)	1.0000	1.0000
Working	1.3724**	1.3246**
Visit of health worker		
No (RC)	1.0000	1.0000
Irregular	1.1905*	4.9803***
Regular	2.7142***	5.3104***
Economic standard of the household		
Low (RC)	1.0000	1.0000
Medium	2.2872***	1.7108**
High	3.5128***	1.9277**
Having television/radio		
No	1.0000	1.0000
Yes	1.3401*	1.6879***

Source: Rajshahi and Mohanpur field data, 2004; RC= Reference category, * = p<0.05, ** = p<0.01, *** = p<0.001

and higher is 5.3 times higher for mothers who are visited regularly by the health workers as compared to those who are not visited at all.

The result exhibits that, mothers of age 20-24 years are 24% less likely to attend hospital or clinic at the time of delivery than the mothers of age 35 years and above. But the mothers of age less than 20 years are 20% more likely to come hospital or clinic for delivery of pregnancy than those of age 35 years and above. As expected, mothers with primary and secondary and higher education are 2.4 and 4.3 times more likely to give birth at health facility. The odds of attending hospital/clinic for delivery is 3.0 times higher for the urban mothers compared to its rural counterpart. Mothers with higher economic standard have received higher odds of giving birth at health facility than the mothers of lower economic standard.

The analysis reveals that, mothers of lower age are more likely to use essential drugs during pregnancy than

Table 6: Multivariate logistic regression estimates of Relative Odds of delivery at a health facility

Characteristics	Relative odds: Delivery at hospital or clinic
Mother's age at delivery	
35+ (RC)	1.0000
20-34	0.7580**
<20	1.2003*
Birth order	
4+ (RC)	1.000
3-Feb	1.7035**
1	2.1975***
Mother's education	
No education (RC)	1.0000
Primary	2.4201***
Secondary and higher	4.2971***
Husband's education	
No education (RC)	1.0000
Primary	2.0139***
Secondary and higher	4.8908***
Residence	
Rural (RC)	1.0000
Urban	3.0205***
Ever used any contraceptive	
No (RC)	1.0000
Yes	1.8751**
Mother's work status	
Working (RC)	1.0000
Non-working	1.5732*
Visit of health worker	
No (RC)	1.0000
Irregular	2.2100**
Regular	3.9913**
Economic standard of the household	
Low (RC)	1.0000
Medium	3.0121***
High	4.3140***
Having television/radio	
No(RC)	1.0000
Yes	1.4037**

Source: Rajshahi and Mohanpur field data, 2004; RC= Reference category, * = p<0.05, ** = p<0.01, *** = p<0.001

Table 7: Multivariate logistic regression estimates of Relative Odds of taking Iron tablet, Vitamin tablet and TT injection

Characteristics	Relative odds: Taken Iron tablet	Relative odds: Taken Vitamin tablet	Relative odds: Taken TT injection
Mother's age at delivery			
35+ (RC)	1.0000	1.0000	1.0000
20-34	1.9740**	1.1924*	1.1735*
<20	2.6684***	1.3276**	1.2319*
Birth order			
4+ (RC)	1.0000	1.0000	1.0000
3-Feb	2.3200***	1.1121*	1.1970*
1	2.7750***	1.1583*	1.2727*
Mother's education			
No education (RC)	1.0000	1.0000	1.0000
Primary	1.1429*	1.3600**	1.1078*
Secondary and higher	1.8286*	1.3800**	1.2634*
Husband's education			
No education (RC)	1.0000	1.0000	1.0000
Primary	1.4242**	1.1960*	1.1026*
Secondary and higher	1.4875**	1.3922*	1.2175*
Residence			
Rural (RC)	1.0000	1.0000	1.0000
Urban	2.5877**	1.2525*	1.1041*

Table 7: Continue

Characteristics	Relative odds: Taken iron tablet	Taken vitamin tablet	Taken TT injection
Ever used any contraceptive			
No (RC)	1.0000	1.0000	1.0000
Yes	4.8945***	1.1097*	1.1268*
Mother's work status			
Working (RC)	1.0000	1.0000	1.0000
Non-working	1.4138**	1.1587*	1.1389*
Visit of health worker			
No (RC)	1.0000	1.0000	1.0000
Irregular	4.0833***	1.2500*	1.2167**
Regular	4.8333***	1.3281*	1.4303**
Economic standard of the household			
Low (RC)	1.000	1.0000	1.0000
Medium	1.4709**	1.1404*	1.1312*
High	2.5728***	1.4211**	1.2149*
Having television/radio			
No(RC)	1.0000	1.0000	1.0000
Yes	1.7931**	1.2265*	1.1013*

Source: Rajshahi and Mohanpur field data, 2004; RC= Reference category, * = p<0.05, ** = p<0.01, *** = p<0.001

the mothers of higher age. Mothers with higher education received higher odds of using such drugs than the mothers with no education. Residence and visit of health workers continue to exert powerful impact on the utilization of these drugs.

CONCLUSION

Economic standard of the household, which was taken as the proxy of family income, is also found to be related with the use of maternal health care services. The prevalence of maternity-care services was higher among the mothers of better economic standard. Better economic standard enables the mothers to have greater health choice for them. To promote the use of health care services among the mothers, their economic standard should be improved. In this regard, to meet the urgent needs, free health services could be provided to the mothers. Television and Radio are found to be another powerful predicator of mother's health service utilization. These days, electronic media is an important source for information on the availability and importance of maternal health care services. The media could also be used to bring about changes in public attitudes towards the use of modern medical services.

This study shows that, the utilization of health services during pregnancy is very poor at Rajshahi. Result of the study shows that, a vast majority 53.8% of the mothers did not receive any ANC during pregnancy and only 9.05% mothers given birth at health facility. At Rajshahi, the prevalence of drug utilization during pregnancy is found relatively higher as compared with other services. About 77.0, 63.8 and 41.2% of the mothers taken TT injection, vitamin tablet and iron tablet respectively, during their last pregnancy.

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