Factors Associated with Complications and Hazards During Delivery: Evidence from Bangladesh Demographic and Health Survey 2004

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Abstract

Objective: This study investigates the impact of some demographic, socio-economic and household-related factors associated with complication during childbirth among women in Bangladesh.

Methods: The study uses data from the 2004 Bangladesh Demographic and Health survey (BDHS, 2004) according to two times spans 1990-1999 and 2000-2004.

Results: The findings reveal that the major delivery-related complications as reported by the women, between 1990-99 and 2000-2004 include long labour (14.9 and 17.3 percent), excessive bleeding (7.9 and 11.2 percent), high fever (3.5 and 4.8 percent) and convulsion (3.3 and 3.3 percent). The bivariate analysis suggest that both groups of these two-time interval mothers who have received sufficient ANC, took delivery assistance from medically trained personnel and mothers who are highly educated; using drinking water form safe sources and also using modern toilet facilities leading to less suffering from pregnancy-related complications as against their opposite counterparts.

Conclusion: The logistic regression analysis elucidates that mother's age at birth, mother's education, sources of drinking water, type of toilet facilities, ANC receiving and delivery assistance have significant effect on complications at childbirth.

Keywords: Pregnancy-related complications, ANC, Delivery assistance, Logistic regression analysis, Bangladesh.

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Introduction

Delivery-related complication is one of the leading causes of maternal morbidity and mortality in Bangladesh. Though childbirth is a normal physiological process, a variety of hazards may arise during delivery, which can lead to grave conditions for both the mother and the child, which can even lead to death. [1] The relatively high incidence of delivery-related complicacy in Bangladesh might be due to inadequate and improper ANC or unskilled and septic manipulations at the time of childbirth without supervision of trained health personnel. [2]

Proper health facilities & adequate medical supervision along with safe, hygienic conditions during delivery can significantly reduce the risk of infections & facilities management of delivery related complications that may lead to maternal or neonatal morbidity and/or mortality. [3]

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In Bangladesh, the current level of maternal mortality is very high, even by the standard of other developing countries. One of the main causes for most of mothers goes to unqualified persons during delivery. [4] The developed countries are fully dependant on doctors and nurses in the maternity hospitals for delivery care. Bangladesh is a developing country and maternity hospitals are quite inadequate. Most of our pregnant mothers are mainly accustomed to deliver births traditionally taking help from traditional qualified or unqualified birth attendant (TBA) or their relatives or neighbors. Bangladesh Maternal Health Services and Maternal Mortality Survey-2001 have reported that only 12 % of births are associated by trained medical professional and overall three-fourths of births are associated by TBA. The high perinatal mortality and maternal mortality in Bangladesh may be attributed to the low prevalence of delivery care and assistance.

Delivery at home remains almost universal in Bangladesh. In Bangladesh, almost all births (92%) are delivered at home often under unsafe and unhygienic conditions. Bangladesh Ministry of Health and Family Welfare [5] estimates of the Maternal Mortality Ratio tend to vary 300 per 100 live births. World Bank [6] reported that the national MMR is at 440 per 100,000 live births. UNFPA has estimated lifetime risk of dying from pregnancy and childbirth-related causes in Bangladesh to be 1 woman in 21, which compares to 1 woman in over 4,000 in the industrialized countries. [7]

According to the Ministry of Health and Family Welfare, another tragic consequence of the continued high number of maternal deaths is that about 75% of babies born to women who have died in childbirth will also die within the first year of life . [8] The choice of delivery places was also found to be affected by family size. Mothers with smaller families were more likely to be attended by a physician at their delivery places compared to mothers with larger families. [9] The latest national Data shows maternal mortality to be around 300 per 100,000 live births (BMHS/MMS-2003) due to the lack of proper care or assistance.

In this article, an effort is made to investigate the characteristics of delivery complications/hazards during childbirth that experience Bangladeshi women and finally to identify the factors which are associated with delivery complications women face.

Data Sources and Methodology

Data Sources: This paper utilizes the data extracted from 2004 Bangladesh Demographic and Health Survey (BDHS), which were conducted under the authority of the National Institute of Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare. The BDHS 2004 is a nationally representative survey from 11,440 ever married women of age 10-49 and 4297 men aged 15-54 from 10,500 households covering 361 sample points (clusters) throughout Bangladesh, 122 urban areas and 239 in the rural areas. The data were collected from six administrative divisions of the country- Barisal, Chittagong, Dhaka, Khulna, Rajshahi and Sylhet. Data collection took place over a five-month period from 1 January to 25 May 2004. Out of 11,440 ever-married sample, 8860 women have at least one child (live or dead) considering the time interval 1990-2004 and dividing the sample according to the two time span; 1990-1999 and 2000-20004 in order to achieve our objectives. In the time span 1990-1999, 3987 samples were identified; while in 2000-2004, 4873 were identified.

Methodology

Data analytic methods envisaged in this paper are bivariate and multivariate analysis. A brief discussion on these methods has been incorporated in the following subsections.

Bivariate Analysis

To meet the objectives, this study considers bivariate analysis. Chi-square test is performed among the variables to identify interrelationship between the variables.

Multivariate Analysis

When we examined each independent variable individually, it can only provide a preliminary idea of how important each variable is by itself. So, the relative importance of all the variables has to be examined simultaneously by some multivariate methods.

There are a variety of multivariate statistical techniques that can be used to predict a binary dependent variable from a set of independent variables. Logistic regression, also called logit regression, is one of them and is used when the response variable may be quantitative, categorical, or a mixture of the two. In a study of determinants of contraceptive use, for example, the response variable may be using or non-use of contraception at the time of the survey. In a situation like this, the standard multiple regression analysis becomes inappropriate as the response and predictors is not related through a linear relationship. One important method that can be used in such a situation is logistic regression. Logistic regression has been widely used in a functional relationship where the response variable is categorical, often either a success or failure.

Let Y_i denote dichotomous-dependent variable for the ith observation and $Y_i = y_i = 1$, if the ith individual is a success and $Y_i = y_i = 0$, if the ith individual is a failure.

So that, $p_i = E\{yi = 1 \mid Xi\} = \dfrac{1}{1+e^{-(\beta_0+B_1X_i)}}$

where X_i is explanatory variable and

$1 - p_i = E\{y_i = 0 \mid X_i\} = 1 - \dfrac{1}{1+e^{-(\beta_0+B_1X_i)}} =$

$\dfrac{e^{-(B_o+B_1X_i)}}{1+e^{-(\beta_0+B_1X_i)}} = \dfrac{1}{1+e^{(\beta_0+\beta_1X_1)}}$

Therefore, we can write $\dfrac{p_i}{1-p_i} = \dfrac{1+e^{(\beta_o+\beta_1X_i)}}{l+e^{-(\beta_o+\beta_1X_i)}}$

$= e^{(\beta_o+\beta_1X_i)}$.....(1)

Now if we take natural log of the equation (1) we obtain $L_i = \log_e(\dfrac{p_i}{1-p_i}) = \beta_o + \beta_1X_i$.....(2)

Here, $p_i/(1-p_i)$ given in (1) is simply the odds ratio and Li given in (2) is known as log odds.

Instead of single explanatory variable, we can count two or more explanatory variables. Let X_{i1}, X_{i2},..... X_{ik} be the vector of k independent explanatory variables for the ith response. The logarithm of the ratio p_i and (l-p_i) gives the linear function of X_{ij} and the n model (2) becomes,

$$L_i = \log_e(\frac{p_i}{1-p_i}) = \sum_{j=o}^{k} B_j X_{ij} \text{.....(3)}$$

Where we consider $X_{i0} = 1$ and β_j is the parameter relation to X_{ij}.

The function (3) is a linear function of both variables X and parameter β. L is called the logit and hence model (3) is called logistic regression model. In order to estimate the parameter of this function, the logistic regression procedure of statistical package SPSS for windows base 10.0 version was used.

Result and Discussion

Complications during Delivery

In response to a question whether mothers suffer from any problem, about 21.9 % of mothers reported that they suffered from any types of hazards in 1990-1999 and 26.1 % in 2000-2004 (Table 1).

The major delivery hazards as experienced by the women in Bangladesh included prolonged labor (i.e. duration of true labor or regular, rhythmic uterine contraction lasting for more than 12 hours); excessive bleeding which may be life threatening; high fever with bad smelling vaginal discharge and convulsions not caused by fever. 14.9 % mothers suffered from prolonged labor and 7.9 % from excessive bleeding in 1990-1999 where the rate is slightly high (17.3 % and 11.2 %, respectively) in 2000-2004. 3.5 % of mothers suffered from high fever and 3.3 % from convulsion in 1990-1999 where the rate is 4.8 % and 3.3 % in 2000-2004, respectively.

Table (1): Distribution of mothers for some selected delivery-related complications according to the two-time span 1990-1999 & 2000-2004.

Problem face	*1990-1999*		*2000-2004*	
	Percentage	*No of cases*	*Percentage*	*No of cases*
Suffered from any complications				
No	*78.1*	*425*	*73.9*	*3596*
Yes	*21.9*	*119*	*26.1*	*1273*
Types of complications				
Long labor				
No	*85.1*	*463*	*82.7*	*4032*
Yes	*14.9*	*81*	*17.3*	*841*
Excessive bleeding				
No	*92.1*	*501*	*88.8*	*4328*
Yes	*7.9*	*43*	*11.2*	*544*
High fever				
No	*96.5*	*524*	*95.2*	*4640*
Yes	*3.5*	*19*	*4.8*	*232*
Convulsion				
No	*96.7*	*526*	*96.7*	*4709*
Yes	*3.3*	*18*	*3.3*	*161*

Differentials of Complications/Hazards during Delivery

In this section differentials of hazards during delivery have been discussed by demographic, health-related socioeconomic and household characteristics of the mothers.

Demographic and Health-Related Characteristics

During 1990-1999 and 2000-2004 mothers who are adolescent are more likely to suffer from complications as compared with younger mothers. The results indicate that adolescent mothers experienced more delivery complications in comparison to younger mothers (Table 2).

Table (2) reveals that mothers who receive insufficient ANC have suffered more from delivery-related complications than mothers who received sufficient ANC during these two time interval. On the other side, during 1990-1999, 34.4 % and 19.1 mothers who suffered from pregnancy-related complications during delivery received assistance from medically-trained personnel and TBA and the corresponding figure for 2004-20004 is 38.7 and 24.1 %. Table (2) also shows that 30.4 % of mothers who cannot tell where to go for pregnancy suffered from complications in 1990-1999, compared to 26.3 % in 2000-2004.

Table (2): Distribution of mothers who did not suffer from any complication during delivery, according to some selected demographic & health- related characteristics by two- time span 1990-1999 & 2000-2004.

	Hazards during delivery						
	1990-1999			2000-2004			
Demographic& Health- related Characteristics	No	Yes	No. of Cases (N)	No	Yes	No. of Cases (N)	No
Mothers' age at Last birth							***
<20	74.5	25.5	145	71.1	28.9	1651	
20-29	80.8	19.2	271	76.3	23.7	2150	
30+	76.5	23.5	115	76.4	23.6	846	
Antenatal care							***
Sufficient	78.5	21.5	246	72.4	27.6	2385	
Insufficient	70.7	29.3	41	68.3	31.7	350	
No care	79.0	21.0	257	76.4	23.6	2132	
Delivery assistance Medically- trained							***
Personnel	65.6	34.4	64	61.3	38.7	702	
TBA	80.9	19.1	429	75.9	24.1	3686	
Others	70.6	29.4	51	76.1	23.9	481	
Told where to go about for Pregnancy Complications							
Yes	77.6	22.4	125	73.0	27.0	1432	
No	70.0	30.0	10	73.7	26.3	76	

Significance level: * = < 0.05; ** = p < 0.01; *** = p < 0.001.

Socioeconomic Characteristics

Table (3) represents that between 1990-1999 and 2000-2004, 28.0 and 26.2 % of mothers who live in urban areas did not suffer from any complications during delivery, whereas in rural areas the rate is found to be 20.0 and 26.8 %. There are some regional variations found in hazards women face during their pregnancy period. Overall Barisal divisions show higher (26.8 %) rate of complications followed by the others divisions in 1990-1999. The result is same in 2000-2004 but the percentage (31.8 %) is quite higher than 1990-1999.

The fact that complications at delivery are inconsistently related to mother's education could be seen clearly from table (3). While the rate of proportion of mothers with no formal schooling suffered complications at childbirth reached 24.0 %, it reached 27.3 % for women with higher education in 1990-1999. On the other hand, 24.8 % of mothers who faced complications received no schooling and 23.8 % received higher education in 2000-2004. Results indicate that more educated mothers faced fewer complications in 2000-2004 than 1990-1999.

Mother's working status doesn't show any relationship with the hazards at delivery. Table (3) provides that mother's who work for cash (24.8 %) suffered comparatively more from pregnancy-related complications than those who do not work (21.1 %) in 1990-1999. But the result is different in 2000-2004 where 26.3 % of mothers who faced complications are not engaged in any works. Similar to mother's education, husband's education does not show any relationship with their wives delivery complications. About 26 % of women whose husbands received secondary education suffered from delivery hazards during childbirth in 1990-1999, while 26.3 % of mothers suffering from childbirth are those -whose husbands received no formal schooling. 22.4% of mothers who read newspaper suffered from hazards during delivery in 1990-1999 and the rate is higher (about 26 %) in 2000-2004. 20.8 % of mothers faced complications during delivery were listening to radio in 1990-1999 and the rate increased in

2000-2004 (25.7 %). Besides, 17.5 % of mothers who watch television suffered from delivery-related complications in 1990-1999. The result is also higher (25.0 %) in 2000-2004 than 1990-1999.

Table (3): Distribution of mothers who did not suffer from any complication during delivery, according to some selected socioeconomic characteristics by two- time span 1990-1999 & 2000-2004.

	Hazards during delivery						
	1990-1999				***2000-2004***		
Socioeconomic Characteristics	***No***	***Yes***	***No. of Cases (N)***		***No***	***Yes***	***No. of Cases (N)***	
Place of Residence								
Urban	*72.0*	*28.0*	*125*		*73.8*	*26.2*	*998*	
Rural	*80.0*	*20.0*	*419*		*73.9*	*26.1*	*3871*	
Administrative division								***
Barisal	*73.2*	*26.8*	*41*		*68.2*	*31.8*	*292*	
Chittagong	*76.5*	*23.5*	*98*		*69.1*	*30.9*	*1015*	
Dhaka	*82.2*	*17.8*	*169*		*74.3*	*25.7*	*1505*	
Khulna	*75.8*	*24.2*	*62*		*71.4*	*28.6*	*546*	
Rajshahi	*76.1*	*23.9*	*138*		*80.6*	*19.4*	*1146*	
Sylhet	*82.9*	*17.1*	*35*		*72.3*	*27.7*	*365*	
Mothers education				*				**
No education	*76.0*	*24.0*	*221*		*75.2*	*24.8*	*1775*	
Primary	*83.6*	*16.4*	*165*		*72.5*	*27.5*	*1476*	
Secondary	*75.2*	*24.8*	*137*		*73.1*	*26.9*	*1348*	
Higher	*72.7*	*27.3*	*22*		*76.2*	*23.8*	*269*	
Mothers earning status								
Not working	*78.9*	*21.1*	*417*		*73.7*	*26.3*	*3996*	
Working for Cash	*75.2*	*24.8*	*105*		*74.3*	*25.7*	*721*	
Others	*76.2*	*23.8*	*21*		*76.0*	*24.0*	*150*	
Husbands education								
No education	*78.9*	*21.1*	*228*		*73.3*	*26.7*	*1907*	
Primary	*79.7*	*20.3*	*153*		*73.5*	*26.5*	*1303*	
Secondary	*73.7*	*26.3*	*114*		*74.1*	*25.9*	*1178*	
Higher	*79.2*	*20.8*	*48*		*76.7*	*23.3*	*480*	
Husbands Occupation								
Manual	*77.4*	*22.6*	*380*		*73.9*	*26.1*	*3437*	
Not-manual	*80.0*	*20.0*	*140*		*74.7*	*25.3*	*1237*	
Others	*78.3*	*21.7*	*23*		*67.2*	*32.8*	*195*	
Watching TV				*				*
Yes	*82.5*	*17.5*	*228*		*75.0*	*25.0*	*2613*	
No	*74.9*	*25.1*	*315*		*72.5*	*27.5*	*2254*	
Listing Radio								**
Yes	*79.2*	*20.8*	*250*		*74.3*	*25.7*	*2172*	
No	*77.2*	*21.7*	*294*		*73.5*	*26.5*	*2696*	
Reading Newspaper								*
Yes	*77.6*	*22.4*	*85*		*73.9*	*26.1*	*781*	
No	*78.3*	*21.7*	*457*		*73.9*	*26.1*	*4088*	

Significance level: * = < 0.05; ** = p < 0.01; *** = p < 0.001.

Household Characteristics

Household factors that have been considered in this section are: household has electricity, sources of drinking water, type of toilet facilities, household assets index and household quality index.

We know that sources of safe drinking water is an important factor affecting safe motherhood. About 22 % of mothers who use well water for drinking purposes suffered from complications during delivery in 1990-1999 and these were 26 % in 2000-2004.

About 30 % of women who suffered due to delivery-related complications during childbirth has no toilet facilities in 1990-1999 and this rate is lower in 2000-2004 (27.5%).

Household possession and quality both are indicators of economic status. Table (4) asserts that 25.3 % mothers who are in the 'lower' category of household possession index, suffered from complications at childbirth in 1990-1999 while 16.7 % of those who suffered from complications lived in the 'upper' class category and it is higher in 2000-2004 where 26.4 % in 'lower' category and 26.3 % in 'upper' category suffered from complications, respectively.

Table (4): Distribution of mothers who did not suffer from any complication during delivery, according to some selected household characteristics by two- time span 1990-1999 & 2000-2004.

	Hazards during delivery						
	1990-1999			***2000-2004***			
Household Characteristics	***No***	***Yes***	***No. of Cases (N)***	***No***	***Yes***	***No. of Cases (N)***	
Household has Electricity							*
Yes	*45.4*	*54.6*	*145*	*74.4*	*25.6*	*1885*	
No	*42.2*	*57.8*	*559*	*73.5*	*26.5*	*2979*	
Sources of drinking Water							***
Piped water	*86.7*	*13.3*	*30*	*76.5*	*3.5*	*328*	
Well water	*77.5*	*22.5*	*507*	*73.8*	*26.2*	*4435*	
Other sources	*85.7*	*14.3*	*7*	*69.2*	*30.8*	*104*	
Type of toilet facility							*
No facilities	*70.0*	*30.0*	*70*	*72.5*	*27.5*	*640*	
Modern facilities	*79.3*	*20.7*	*329*	*74.6*	*25.4*	*2775*	
Open/Hanging/Others	*79.3*	*20.7*	*145*	*73.0*	*27.0*	*1454*	
Household assets Index							
Lower	*74.4*	*25.3*	*241*	*73.6*	*26.4*	*2178*	
Middle	*75.0*	*25.0*	*88*	*74.5*	*25.5*	*966*	
Upper	*83.3*	*16.7*	*215*	*73.7*	*26.3*	*1725*	
Household quality Index							
Lower	*72.8*	*27.2*	*243*	*72.8*	*27.2*	*2248*	
Middle	*84.0*	*16.0*	*225*	*74.9*	*25.1*	*1898*	
Upper	*77.0*	*23.0*	*74*	*74.3*	*25.7*	*705*	

Significance level: * = < 0.05; ** = p < 0.01; *** = p < 0.001

Determinants of Hazards during Delivery: Logistic Regression Analysis

Bivariates analysis with chi-square test show numerous significant associations between different background characteristics and complications at childbirth. However, we concentrate only on the results of the multivariate analysis, which provides adjusted association of different characteristics of the respondent with hazards during delivery.

To identify the factors effecting the complications at childbirth, we employed linear logistic regression, as our dependent variable is a dichotomous one.

The results are presented in table (5). Mothers' age at last birth has significant negative effect on complication at childbirth. Higher aged women are likely to face fewer problems during delivery. Mothers who have taken insufficient antenatal care are reported 1.1 times more likely to suffer than mothers with sufficient antenatal care.

Mother's delivery assistance represents negative association with mothers' complications during delivery. Mothers who have taken delivery assistance from TBA, while others reported few suffering from pregnancy-related complication than those who took assistance from medically-trained personnel. Highly educated mothers are 0.33 times less likely to face delivery-complications than mothers with no formal schooling.

Mothers who use drinking water from a well or others sources are likely to face 1.6 and 1.8 times more delivery-complications than mothers who use piped water for drinking purposes. Modern toilet facilities are also important indicators of maternal health care. Mothers who use modern toilet facilities and other facilities are less exposed to delivery complications than those who has no such facilities.

Table (5): Mulivariate logistic regression estimates of regression coefficient and relative odds for significant characteristics of mother who suffered from hazards during delivery by time span 2000-2004.

Characteristics	*Hazards during delivery 2000-2004*	
	Coefficient β	*Odds ratio*
Mothers' age at last birth		
<20 ®	…….	*1.000*
20-29	*-0.336****	*0.599*
30+	*-0.325****	*0.485*
Antenatal care Received		
Sufficient ®	…….	*1.000*
Insufficient	*0.178***	*1.194*
No care	*-0.518*	*0.678*
Delivery assistance		
Medically trained personnel	…….	*1.000*
TBA	*-1.239***	*0.107*
Others	*-1.145***	*0.099*
Administrative division		
Barisal	…….	*1.000*
Chittagong	*-0.235*	*0.265*
Dhaka	*-0.195*	*0.216*
Khulna	*-0.105*	*0.918*
Rajshahi	*-0.033*	*0.968*
Sylhet	*-0.548*	*0.578*
Mothers education		
No education ®	…….	*1.000*
Primary	*0.425*	*1.523*
Secondary	*0.563***	*1.588*
Higher	*-0.295****	*0.333*
Sources of drinking Water		
Piped water ®	…….	*1.000*
Well water	*0.459**	*1.632*
Other sources	*0.126****	*1.885*
Type of toilet facility		
No facilities ®	…….	*1.000*
Modern facilities	*-0.190****	*0.210*
Open/Hanging/Others	*-0.178**	*0.837*
Constant	***-0.579***	

Model Chi-square	***273.65***
Degrees of freedom (df)	***41***
Probability	***0.000***

Note: ® represents reference category.
Significance level: * = < 0.05; ** = p < 0.01; *** = p < 0.001.

Conclusions and Implications

The study found that about 21.9 % of mothers reported that they did not suffer from any types of hazards in 1990-1999 and 26.1 % in 2000-2004, it is clear that this rate has increased in 2000-2004 meaning that delivery complication are increased much more in day by. Adolescent mothers are more likely to suffer from complications as compared to younger mothers. Of mothers who have suffered from any delivery related complications, among them 21.5 percent have taken sufficient ANC and 29.3 % insufficient ANC in 1990-1999. 34.4 % of mothers reported delivery complications although they have taken assistance from medically trained personnel during delivery in 1990-1999 and the rate has increased in 2000-2004 (38.7 %).

The study represents that 28.0 and 20.0 % of mothers who live in urban and rural areas suffered from complication during delivery in 1990-1999 where the rate is lower (26.2 and 26.1%) in 2000-2004. The rate of mothers with no formal schooling who suffered from complications at childbirth is 24.0 % and it is 27.3 % among women with higher education in 1990-1999. Results indicate that educated mothers were faced fewer complications in 2000-2004 than 1990-1999. Similar to mother's education, husband's education does not show any relationship with their wives' delivery complications. About 26 % of women whose husband received secondary education suffered from delivery hazards during childbirth in 1990-1999 and in the case of husband with no formal schooling the rate is 26.3 %. Mass media exposure also shows significant effect on delivery complications of mothers. Of mothers who read newspapers 22.4 % suffered from hazards during delivery in 1990-1999 and the rate is high (about 26 %) in 2000-2004.

Besides, 17.5 % of mothers who watch television suffered from delivery complications in 1990-1999. The result is also higher (25.0 %) in 2000-2004 than 1990-1999. About 22 % of mothers who use well water for drinking purposes suffered from complications during delivery in 1990-1999 and it is 26 % in 2000-2004. 30 % of women who suffered from delivery complications during childbirth are those who has no toilet facilities in 1990-1999 and this rate is lower in 2000-2004 (27.5 %). 25.3 % of mothers who are in the 'lower' category of the household possession index, suffered from complications at childbirth in 1990-1999 while 16.7 % from those who suffered from complications lived in the 'upper' class category and this is higher in 2000-2004 where the rate are 26.4 % in the 'lower' category and 26.3 % in 'upper' category, respectively. The logistic regression analysis elucidates that mother's age at birth, mother's education, sources of drinking water, type of toilet facilities ANC receive and delivery assistance has significant effect on complication at childbirth.

In light of the above discussion, the following recommendations should be made:

- Spread awareness regarding appropriate behaviors during pregnancy, delivery and the post-partum period, and generate demand for use of maternal health services. Orient health service providers to be responsive and respectful to the clients.
- Government should ensure available maternal health care center for providing ANC especially in the rural areas. Number of visits by FWV/FWA to rural women during pregnancy should be increased. It should expand and improve the quality of post-natal care. Upazila health complexes, MCWCs and district hospitals should be upgraded with the basic and comprehensive post natal care.

- Expand and improve the quality of normal delivery at home by trained providers and introduce post-partum visits. Selected non-medically trained providers, who provide outreach services to all women of reproductive age, should receive basic mid-wifery training.

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العوامل المرتبطة بمخاطر الولادة: دليل من الدراسة المسحية لشؤون السكان والصحة

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الملخص

الهدف: تسعى هذه الدراسة إلى تحري أثر بعض العوامل السكانية، والاجتماعية الاقتصادية، والعوامل المتعلقة بالأسر في المخاطر المتوقعة خلال عملية الولادة عند نساء بنغلادش.

الطرق: تستخدم هذه الدراسة بيانات من دراسة مسحية لخصائص مدينة بنغلادش الصحية والسكانية (2004) على فترتين زمنيتين مختلفتين (1990-1999) و (2000-2004).

النتائج: أظهرت نتائج الدراسة أن من أهم المخاطر المرافقة لعملية الولادة كما وردت على لسان الأمهات في بنغلادش عن الفترتين (1990-1999) و(2000-2004) ما يلي:

المخاض الطويل (14.9%؛ 17.3%)، والنزف الشديد (7.9%؛ 11.2%)، والحرارة المرتفعة (3.5%؛ 4.8%) والتشنج (3.3%؛ 3.3%). ويشير التحليل الثنائي المتغير إلى أن الأمهات من كلتا المجموعتين (كل مجموعة تنتمي إلى إحدى الفترتين الزمنيتين) اللواتي حصلن على جرعة كافية من (ANC)، واللواتي تمت مساعدتهن أثناء الولادة من قبل كادر طبي متدرب، والأمهات ذوات الدرجات العلمية العليا، واللواتي يستخدمن ماء الشرب الصحي والآمن، واللواتي يستخدمن دورات مياه حديثة، كلهن تعرضن لقدر من المعاناة بسبب مخاطر الولادة بالنسبة للنساء اللواتي لم يحصلن على هذه المميزات.

الخلاصة: يخلص تحليل انحدار المنطق الرمزي إلى أن عمر الأم عند الولادة، ودرجة تعليمها، ومصادر مياه الشرب التي تستخدمها، ونوع دورات المياه، وحصولها على جرعات ANC كافية بالإضافة إلى حصولها على مساعدة أثناء الولادة؛ كلها لها تأثير فعال على المخاطر التي قد تواجهها أثناء الولادة.

الكلمات الدالة: المخاطر المرتبطة بعملية الولادة، ANC، مساعدة أثناء الولادة، تحليل انحدار المنطق الرمزي، بنغلادش.