Women's Autonomy and its Influences on Utilization of Maternal and Child Health Care Facilities in Bangladesh

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Abstract: Women's autonomy and its association with maternal and child health care have emerged as a focal point of investigations and interventions around the world. It is also an important issue in Bangladesh. In this paper, different dimensions of women's autonomy and their influences into maternal and child health-care utilization are investigated using data from BDHS 2007. The core hypothesis behind this work is that, women's with higher autonomy will be more likely to use maternal and child health care services. We employed binary logistic regression and multinomial logistic regression model for the multivariate analyses part. In this study, women's autonomy defined as women's decision making power relative to their male partners. Women's autonomy has increased with age, education, employment and number of children. This study showed that maximum autonomy indicators were important predictors of maternal and child health care utilization. Policymakers need to address women's autonomy in the household in addition to implement direct health interventions towards improvement of maternal health & child health care.

Key Words: Women autonomy, Child care, Maternal care, Binary logistic, Multinomial logistic

Introduction

Female autonomy has widely been acknowledged as a major factor that contributes to better demographic outcomes. It is a multi-dimensional concept, which refers to different aspects of women's life. This is typically defined as the ability of women to make choices/decisions within the household relative to their husbands. The well quoted study of Dyson and Moore in the Indian context on 'On Kinship Structures and Female Autonomy' (1983) define Autonomy as "the capacity to manipulate one's personal environment and the ability – technical, social and psychological to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates".

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Historically, numerous research works were done to assess the impact of women autonomy on reproductive health and behavior. In this connection we have decided to work on the mentioned subject matter in context of Bangladesh.

According to CIA World Fact Book, July 2011, Bangladesh, a country in the Southeast Asia with a population of 159 million makes it the world's seventh densest populated country having 1,074 people per square kilometer, population growth rate is 1.566%, sex

ratio at birth 1.04 male(s)/female. Out of total population, 48.9% is women, of whom nearly 86% lives in rural areas.

In general, women are the most deprived section of the population in this part of the world. The situation of Bangladeshi women is bleaker. Most women have no independent income source because they have low education levels, few marketable skills, marry at an early age, and do not own land or property. It is a well established fact that in a patriarchal society like Bangladesh, women are ascribed a lower status compared to men who have the sovereign power to control households and society as a whole, while women are often secluded in their homes (Balk, 1997). Bangladesh is a country in which women face much restriction. Data from Demographic Health Survey (DHS) shows that, just over one in five women are solely responsible for decisions relating to their own health and large majority is not permitted to travel outside their household unaccompanied. Bangladesh ranks very low at 146 out of 182 countries on the Gender Empowerment Measure (Human Development Report, 2009) and the continuing high rates of maternal mortality and morbidity indicate serious gender inequity issues and low priority afforded to the status of women and women's reproductive right in Bangladesh. The Global Gender Gap index 2010 developed by the World Economic Forum, ranks Bangladesh 82 out of 134 countries in term of gender inequality. Autonomy and empowerment are essential for the achievement of substantial development. The full participation and partnership of both men and women is required in productive and reproductive life, including shared responsibilities for the care and nurturing of children and maintaining the household. In developing countries like Bangladesh, this type of study is important, because scenario of women's autonomy and women's maternal and child health care seeking behavior is not good. Again from above discussion we found that, increased autonomy of women is likely to increase their ability to seek out and use health services. This study is an attempt to show how different dimensions of women's autonomy and status affect maternal and child health.

Objectives of the study
- To find out the level of women's autonomy in Bangladesh.
- To explore the relationships between socio-economic and demographic determinants of women's autonomy.
- To ascertain the association between the dimensions of women's autonomy and the categories of maternal health care sought.
- To determine the differentials in child health status in relation to women's autonomy dimensions and the background characteristics thereof.

Data and methods
The data utilized for this study extracted from Bangladesh Demographic and Health Survey (BDHS) conducted over a five month period from March 24 to August 11 2007 under the authority of the NIPORT, Ministry of Health and Family Welfare, Bangladesh. The BDHS 2007 used five questionnaires: a Household Questionnaire, Women's Questionnaire, a Men's Questionnaire, a Community Questionnaire and a Facility Questionnaire. In this study, at first we have considered only those mothers who gave

child in last five years. This is 6,150. Among these individuals we considered currently married women aged 15-49, finally we have 6021 individual.

Simple statistical techniques like frequency distribution along with percentage were applied to check for data and to obtain descriptive statistics. To determine whether significant association exists between variables, cross-tabulation and chi-square test were done. Missing values or non-responses were also included in the analysis to get the exact picture. In this paper due to page limitation we don't assign all the table that are available for ready reference. Multivariate analysis was done to assess the relative effects of the explanatory variables on outcome variables. Since our outcome variables include both dichotomous and trichotomous variables, we employed both binary logistic and multinomial logistic regressions. Multinomial Logistic regression models were first fitted to investigate factors predicting the likelihood of involvement of women in decision-making on household and economic matters, freedom of goes to health centre alone and on visiting relatives/families. We use Binary logistic regression models to investigate the effect of women's autonomy on maternal and child health care.

BDHS 2007 has been installed in the SPSS (Statistical Package for Social Science) 11.5 version for windows format. The package of MS office 2007 has been used for documentation as well as presentation.

Variables of the study

In our study, some variables were recorded and at the same time some new variables were created by combining information of other variables.

Dependent variables and their measures

Four dependent variables are used to investigate the influences of women's autonomy on maternal and child health care utilization. These include Antenatal care during pregnancy, delivery care, postnatal care and child immunization status.

Antenatal care refers to pregnancy-related care provided by a health worker either in a medical facility or at home. In our study antenatal care can be assessed according to the type of service provider. We used a binary variable to model delivery care, reflecting whether the last child was born at a medical facility (hospital or clinic or NGO) versus at home, regardless of the type of attendant (health professional or other person). In our study postnatal care is assessed by women who delivered a child had received a health check after the delivery. In our study, child is considered to be fully vaccinated if it has received a dose of BCG vaccine, three doses of DPT, three doses of polio and a measles vaccination on age 12-23 months.

Independent variables and their measures

1) Women's autonomy indicators
The degree of women's autonomy is assessed in four different areas
• Economic Decision Making Autonomy

- Household Decision Making Autonomy
- Freedom of movement Autonomy
- Attitudes towards domestic violence.

Economic decision making is based on two indicators such as participation in the family's large household and daily purchases. In our study we have considered, final say on own health care and final say on child health care as an indicators of household decision making autonomy. We have measured women's freedom of physical movement by making index on the basis of questions about whether they can go outside the village/town/city or hospital alone and whether they can visit their relative's house alone. Attitudes towards domestic violence were quantified by an additive index that takes on values from 0 to 4. This index captures the number of statements to which the respondent agreed that physical violence was justified. These statements relate to the following situations about which the respondent was asked whether she felt the use of physical violence was justified; (i) she neglects children, (ii) argues with the husband, (iii) refuses sex or (iv) goes out without informing the husband. Responses are coded as 1) respondent, 2) respondent and husband/partner jointly, 3) respondent and someone else, 4) husband/partner, and 5) someone else in the household. To make analysis convenient, the response "respondent alone" has been renamed as "female autonomy" to indicate her exclusive autonomy; the responses "respondent and husband" and "respondent and other person" were categorized as "respondent jointly" and the responses husband alone and someone else are categorized as "husband/others".

2) Socio-economic and demographic characteristics

In our study we have four demographic variables and ten socio-economic variables. We have considered age in 5 year group, births in last five years, sex of household head, birth order as demographic variables and division, place of residence, respondent's education level, respondent's working status, partner's education level, wealth index, religion, watching television, listening radio, read newspaper/magazine as socio-economic variables.

Autonomy characteristics of women in Bangladesh

Women autonomy is a precondition for the development of a country and also for the well being of a household. Figure 1 shows the percentage distribution of women's autonomy in Bangladesh and their attitudes towards partner's violence. Small number of women (8.2%) have sole final say on making large household purchases, 29% of women have final say on making household purchases for daily needs. Only 11% can visit family/relatives at will, approximately 13% of women have final say on own health care alone.

Source: Calculated from the 2007 BDHS

Results:

Determinants of women's autonomy
In final stage of analysis, for measuring pattern of women's autonomy, we conducted multinomial logistic regression to estimate women's odds of making decision about large household purchases, daily household purchases, own health care, child health care and freedom of movement autonomy which are shown in table 1(appendix). For simplicity of the table, I rearranged the table and shown here the result where respondents make decision alone compared to husband/others. I have also worked on cases where respondents make decisions jointly compared to husband/others for which tables are available for ready reference. The first columns of coefficients are for final say on large purchases to a respondent alone compared to husband/others. In table 1 (appendix) we can see that, respondent's age showed significant effect for the entire indicator of women's decision making autonomy. Regional impact is also present for economic, household and freedom of movement autonomy of women. Place of residence also has vital impact on women's decision making autonomy. Rural women decide alone about large household purchase 25.6% less than that of urban women. Rural women's household decision making autonomy & freedom of movement autonomy are less than that of urban women. Working women have high autonomy than non working women for both of the indicators of economic decision making autonomy, household decision making autonomy and freedom of movement autonomy. Women's education is one of the most important factors for decision making autonomy. Wealth index is found to be significant for visiting family/relatives.

Table 2 (appendix) presents the logistic regression analysis for justification of wife beating. From table we summarized that, higher educated women think wife beating is not justified than that of non-educated women. Regional effect have also been found for justification of wife beating. Non-Muslim women think wife beating is not justified than that of Muslim women.

Women's Autonomy and Maternal Health Care Seeking Behavior
For calculation purpose, in case of multinomial analysis we have merged trained and untrained person into one category, named 'received antenatal care'. In order to estimate the independent effects of each variables controlling for other variables, data has been further analyzed by adopting linear logistic technique.

Table 3 (appendix) through table 5 (appendix) shows the results of multivariate logistic regression for antenatal care, delivery care and postnatal care respectively as outcome with women's decision making autonomy, socio-economic and demographic characteristics as independent variables. Two separate models were run for maternal care by each of the dimension of women's autonomy, while the full model adds the demographic and socioeconomic background variables to examine whether the effects of the autonomy variables are influenced by the socio-economic and demographic variables.

For economic decision making autonomy, from the first model in Table 3(appendix), it is evident that women's final say on large household purchase have a strong positive association with the level of antenatal care obtained. Women in the age range 30-34 are more likely to receive antenatal care. Antenatal care receiving decreases with higher birth

order for mothers. Religious belief also influences the health care seeking behavior of pregnant women. Regional impact and wealth index are also found to be significant for receiving antenatal care; it is highest for Khulna division. Again, rural women less likely (OR = 0.659) to receive antenatal care than that of urban women. The higher educated women get 5.826 times more antenatal care than non-educated women. Mother exposed to media receives more antenatal care than that of non-exposed mothers. We have found strong association with the level of antenatal care obtained for, with all of the indicators of household decision making autonomy. More specifically, women who can make the final decision alone/jointly, in case of own health care and child health care are more likely to receive antenatal care in their last pregnancy than women who do not have a final say. Final say on own health care alone shows positive association with use of antenatal care when controlling for the socio-economic variables. Rural women's are less likely to receive antenatal care than that of urban women. Wealth index and Mother's education play vital role on antenatal care. Richest women get 2.219 times more antenatal care than that of the poorest women. Religious belief and media expose also influence the health care seeking behavior of pregnant women. In case of freedom of movement autonomy, in model 1, we have found significant effect for both of the indicators of autonomy on antenatal care. In full model, both of the indicators of freedom of movement autonomy still demonstrate a strong association with use of antenatal care. For women's attitude towards violence, in model 1, women who agree with wife beating are less likely (OR = .708) to receive antenatal care than women who disagree about wife beating. Regional impact is also found to be significant for receiving antenatal care; it is highest for Khulna division.

For limitation we cannot represent frequency distribution table. From our frequency distribution only 17.1% women delivered under medical facility where a majority of women (82.9%) delivered under non-medical facility.

In case of delivery care, for economic decision making autonomy, from the first models in Table 4(appendix), it is clear that women's final say on large household purchase jointly have a strong positive association with the level of delivery care obtained. Delivery care increases with age of respondents and later decrease for age 40+. Regional impact is also found to be significant for receiving delivery care. Mother's education, place of residence and wealth index shows significant effect. Model shows that women with secondary and higher educated husbands are 1.315 and 2.205 times respectively more likely to utilize the delivery care than women with non-educated husband. Antenatal care has significant effect on delivery care. Religious belief also influences the health care seeking behavior of pregnant women. For household decision making autonomy, we found strong association with the level of delivery care obtained for all the indicators of household decision making autonomy. More specifically, women who can make the final decision alone/jointly in case of own health care and child health care are more likely to have received delivery care in their pregnancy than women who do not have a final say. In full model both indicators showing no association with use of delivery care. Mother who receives antenatal care from trained provider gets 3.797 times delivery care than that of received no antenatal care. For freedom of movement autonomy, in

model 1, we have found significant effect for both of the indicators on delivery care. In full model, decision about going to health centre alone showing association with use of delivery care when controlling the demographic and socio-economic variable. For women's attitude towards violence, women who agree with wife beating are less likely to receive delivery care in their pregnancy than women who disagree about wife beating. In full model, agree with wife beating with use of delivery care when controlling for the demographic and socio-economic variable showed insignificant effect.

For economic and household decision making autonomy, from the first models in Table 5 (appendix), we have found significant effects for final say on large household purchases and final say on own healthcare jointly on postnatal care. In full model the two indicator of economic and household decision making autonomy demonstrated no association with postnatal care. Mother's education plays vital role on postnatal care, higher educated women receives more postnatal care than that of non-educated mothers. Antenatal care and delivery care have significant effect on postnatal care for all dimension of autonomy. In full model final say on child health care jointly demonstrates no association with use of postnatal care when controlling for the socio-economic variables. For freedom of movement autonomy, in first model, we found significant effect for final say on visit to family/relatives on postnatal care. In full model, we have included several determinants of postnatal care along with freedom of movement autonomy. Regional impact is also found to be significant for receiving postnatal care. It is highest for Khulna division. For women's attitude towards violence, women who agree with wife beating are less likely to receive postnatal care in their pregnancy than women who disagree about wife beating.

Women's Autonomy and Child Health Care Seeking Behavior

From percentage distribution we know, 82% children are fully immunized while 18% children are not fully immunized.

From Table 6(appendix) we can summarize that, for economic decision making autonomy in model 1 & model 2 we found insignificant association with seeking child immunization. Division and mother's education shows significant association with child immunization for economic and household decision making autonomy. In first model, children of mother, who have contribute to final say on child care jointly are found to be 1.725 times more likely to immunized than that children of mother who do not have final say. In case of freedom of movement autonomy, from table 6(appendix) we found that for first model final say on visit family/relatives jointly, has significant association with child immunization. In full model, final say on visit family/relatives jointly still retained its significance. Division, mother's education, birth order are found to be significant differential on child immunization. In case of attitudes towards domestic violence, who disagree wife beating are more likely to receive all necessary vaccinations and showing significant effect for both model.

Conclusion

In this study we have assessed decision making autonomy of women by six indicators and in addition, another indirect measure of women's autonomy, which is attitude towards wife beating have also been used. From our study we have found that, women's level of autonomy increases with the increase of age. Urban women are more autonomous than their rural counterparts. Working and educated women are more likely to be associated with most of the dimensions of autonomy. Women's economic status has also an impact on her decision making power. Most of the autonomy indicators are related to maternal health care seeking behavior. With increasing women's autonomy child immunization also increases.

Women's development is a global concern. In most of the developing countries and noticeably in Bangladesh also, women issues are in the forefront and the government of Bangladesh has taken many initiatives to guarantee the equal rights of men and women. But in Bangladesh women's position is not yet satisfactory. So, today raising women's status is a powerful force for improving the health, longevity, mental and physical capacity, and productivity of the next generation of young adults.

Recent policies toward improving maternal and child health care are heavily tilted toward providing formal education to women with the hope that it will enhance their power and consequently influence access to health care. While this approach is commendable, we suggest that policymakers also should pay attention to factors that directly limit the decision-making autonomy of women in Bangladesh. This is justified by the fact that women's autonomy and socioeconomic factors, especially education and rural–urban residence can affect health care utilization independently.

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APPENDIX

Table 1: Multinomial logistic regression analysis for predicting women's autonomy by background characteristics, BDHS 2007.

Background Characteristics	Women involved in decisions to					
	Purchase large items	Purchase daily items	own healthcare	child healthcare	Visit families	Goes to health centre alone
Age						
15-19(r)	1	1	1	1	1	1
20-24	2.014[c]	1.595[c]	2.459[c]	2.166[c]	2.413[c]	1.530[c]
25-29	3.027[c]	2.114[c]	3.969[c]	2.520[c]	3.093[c]	2.397[c]
30-34	3.400[c]	2.921[c]	3.558[c]	2.762[c]	4.098[c]	2.595[c]
35-39	5.007[c]	2.928[c]	5.763[c]	3.566[c]	5.239[c]	2.001[c]
40+	4.235[c]	3.092[c]	5.097[c]	3.151[c]	4.916[c]	3.449[c]
Division						
Barisal(r)	1	1	1	1	1	1
Chittagong	0.930	0.970	0.979	1.064	0.741[b]	1.004
Dhaka	0.382	1.391[c]	0.629[c]	1.011	0.627[c]	1.142
Khulna	1.460[a]	1.526[c]	0.877	1.480[b]	0.703[a]	1.393[a]
Rajshahi	0.914	2.281[c]	0.708[b]	1.382[b]	0.857	0.892
Sylhet	0.952	0.726[b]	0.580[c]	0.497[c]	0.557[c]	0.503[c]
Place of residence						
Urban(r)	1	1	1	1	1	1
Rural	0.744[b]	1.030	0.738[c]	0.990	0.795[b]	0.659[c]
Working status						
Not working(r)	1	1	1	1	1	1
Working	1.445[c]	1.697	1.138	1.359[c]	1.590[c]	1.359[c]
Religion						
Muslim(r)	1	1	1	1	1	1
Non-Muslim	0.450[c]	0.772[b]	0.669[b]	0.785	0.492[c]	0.835
Background Characteristics	Women involved in decisions to					
	Purchase large items	Purchase daily items	own healthcare	child healthcare	Visit families	Goes to health centre alone
Partner education						
No education(r)	1	1	1	1	1	1
Primary	0.999	0.766[c]	0.981	0.952	0.853	0.919

Secondary	0.739[a]	0.765[b]	1.005	0.962	1.010	0.821[a]
Higher	0.721	0.737[a]	0.843	2.658[c]	1.212	0.841
Wealth index						
Poorest(r)	1	1	1	1	1	1
Poorer	0.940	1.232[a]	1.097	0.979	0.913	0.693[c]
Middle	0.806	1.210[a]	0.815	1.054	1.113	0.868
Richer	0.843	1.180	0.943	0.953	1.133	0.751[b]
Richest	0.742	1.258	0.937	1.060	1.100	0.597[c]
Watch TV						
No(r)	1	1	1	1	1	1
Yes	1.673[c]	1.166[a]	1.311[b]	1.452[c]	1.336[b]	1.535[c]

r : Reference category, **a** Significant at 10%, **b** Significant at 5%, **c** Significant at 1%

Source: Calculated from the 2007 BDHS

Table 2: Binary logistic regression estimates for women's justification of wife beating by selected background characteristics, BDHS 2007.

Background characteristics	Odds ratio	Background characteristics	Odds ratio
Age		**Division**	
15-19(r)	1	Barisal(r)	1
20-24	0.804[b]	Chittagong	0.817[b]
25-29	0.897	Dhaka	0.546[c]
30-34	0.984	Khulna	0.851
35-39	0.895	Rajshahi	0.583[c]
40+	1.059	Sylhet	0.788[b]
Type of place of residence		**Current working status**	
Urban(r)	1	Not Working(r)	1
Rural	1.063	Working	0.985
Respondent education		**Partner education**	
No education(r)	1	No education(r)	1
Primary	1.034	Primary	0.972
Secondary	1.051	Secondary	1.004
Higher	0.391[c]	Higher	0.782[a]
Religion		**Read newspaper**	
Muslim(r)	1	No(r)	1
Non-Muslim	0.727[c]	Yes	0.787[b]

r : Reference category, **a** Significant at 10%, **b** Significant at 5%, **c** Significant at 1%

Source: Calculated from the 2007 BDHS

Table 3: Binary logistic regression estimates for antenatal care by selected background characteristics and autonomy indicators, BDHS 2007

Background characteristics	Receive antenatal care							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (With ATDV*)	Model 2 (Full)
FSPLI*								
Husband/others(r)	1	1						
Respondent alone	1.287[b]	1.262						
Respondent jointly	1.310[c]	1.160[a]						
FSPDI*								
Husband/others(r)	1	1						
Respondent alone	1.046	1.120						
Respondent jointly	1.032	1.055						
FSOHC*								
Husband/others(r)			1	1				
Respondent alone			1.178	1.263[a]				
Respondent jointly			1.193[b]	1.013				
FSCHC*								
Husband/others(r)			1	1				
Respondent alone			1.417[c]	1.126				
Respondent jointly			1.388[c]	1.225[b]				
FSVFOR*								
Husband/others(r)					1	1		
Respondent alone					1.387[c]	1.258[a]		
Respondent jointly					1.310[c]	1.143[a]		
GHCA*								
No(r)					1	1		
Yes, alone					1.422[c]	1.422[c]		
Yes, with other					1.198[b]	1.311[c]		
Read newspaper								
No(r)		1		1		1		1
Yes		2.164[c]		2.190[c]		2.106[c]		2.164[c]
Background characteristics	Receive antenatal care							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (With ATDV*)	Model 2 (Full)
Wife beating Justified								
No(r)							1	1
Yes							0.708[c]	0.928
Age								
15-19(r)		1		1		1		1
20-24		1.443[c]		1.438[c]		1.429[c]		1.457[c]
25-29		1.527[c]		1.512[c]		1.491[c]		1.553[c]
30-34		1.756[c]		1.769[c]		1.715[c]		1.811[c]
35-39		1.692[c]		1.693[c]		1.687[c]		1.751[c]
40[+]		1.349		1.339		1.299		1.392
Division								
Barisal(r)		1		1		1		1

Chittagong		1.081		1.094		1.091		1.095
Dhaka		0.973		1.013		0.983		0.986
Khulna		1.598[c]		1.630[c]		1.621[b]		1.642[c]
Rajshahi		1.581[c]		1.619[c]		1.651[b]		1.615[c]
Sylhet		1.137		1.173		1.180		1.130
Place of residence								
Urban(r)		1		1		1		1
Rural		0.659[c]		0.659[c]		0.676[b]		0.661[c]
Religion								
Muslim(r)		1		1		1		1
Non Muslim		1.270[b]		1.254[a]		1.267[a]		1.256[a]
Watch TV								
No(r)		1		1		1		1
Yes		1.349[c]		1.355[c]		1.329[c]		1.369[c]
Background characteristics	**Receive antenatal care**							
	Model 1 (EDMA[*])	Model 2 (Full)	Model 1 (HDMA[*])	Model 2 (Full)	Model 1 (FMA[*])	Model 2 (Full)	Model 1 (ATDV[*])	Model 2 (Full)
Partner education								
No education(r)		1		1		1		1
Primary		1.151[a]		1.141		1.154[a]		1.144
Secondary		1.716[c]		1.700[c]		1.718[c]		1.698[c]
Higher		1.638[c]		1.599[c]		1.625[c]		1.610[c]
Respondent education								
No education(r)		1		1		1		1
Primary		1.514[c]		1.529[c]		1.500[c]		1.516[c]
Secondary		2.109[c]		2.131[c]		2.098[c]		2.110[c]
Higher		5.826[c]		5.856[c]		5.821[c]		5.878[c]

r : Reference category, [a] Significant at 10%, [b] Significant at 5%, [c] Significant at 1%

[*]**NOTES**: FSPLI= Final say on purchasing large items, FSPDI= Final say on purchasing daily items, FSOHC= Final say on own health care, FSCHC= Final say on child's health care, FSVFOR= Final say on visits to family or relatives, GHCA=Goes to health centre alone, EDMA= Economic decision making autonomy, HDMA= Household decision making autonomy, FMA= Freedom of movement autonomy, ATDV= Attitude towards domestic violence

Source: Calculated from the 2007 BDHS

Table 4: Binary logistic regression estimates for delivery care by selected background characteristics and autonomy indicators, BDHS 2007.

Background characteristics	Receive delivery care							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (With ATDV*)	Model 2 (Full)
FSPLI*								
Husband/others(r)	1	1						
Respondent alone	1.215	1.192						
Respondent jointly	1.462[c]	1.105						
FSPDI*								
Husband/others(r)	1	1						
Respondent alone	0.944	0.882						
Respondent jointly	0.912	0.842						
FSOHC*								
Husband/others(r)			1	1				
Respondent alone			1.157	1.012				
Respondent jointly			1.307[c]	0.974				
FSCHC*								
Husband/others(r)			1	1				
Respondent alone			1.708[c]	1.132				
Respondent jointly			1.393[c]	0.903				
FSVFOR*								
Husband/others(r)					1	1		
Respondent alone					1.530[c]	1.109		
Respondent jointly					1.378[c]	0.971		
GHCA*								
No(r)					1	1		
Yes, alone					1.325[c]	1.118		
Yes, with other					1.224[b]	1.294[b]		
Background characteristics	Receive delivery care							
	Model 1 (EDMA*)	Model 2 (Full)	Model 1 (HDMA*)	Model 2 (Full)	Model 1 (FMA*)	Model 2 (Full)	Model 1 (ATDV*	Model 2 (Full)
Age								
15-19(r)		1		1		1		1
20-24		1.236		1.225		1.226		1.227
25-29		1.835[c]		1.788[c]		1.803[c]		1.821[c]
30-34		2.675[c]		2.617[c]		2.611[c]		2.648[c]
35-39		4.219[c]		4.028[c]		4.164[c]		4.193[c]
40[+]		3.887[c]		3.772[b]		3.806[c]		3.872[b]
Division								
Barisal(r)		1		1		1		1
Chittagong		0.926		0.896		0.919		0.919
Dhaka		1.377[a]		1.393[a]		1.347[a]		1.351[a]
Khulna		1.722[c]		1.703[c]		1.699[c]		1.701[c]
Rajshahi		1.102		1.093		1.094		1.078
Sylhet		0.957		0.970		0.956		0.948
Place of residents								
Urban(r)		1		1		1		1
Rural		0.605[c]		0.610[c]		0.601[c]		0.609[c]

Respondent education				
No education(r)	1	1	1	1
Primary	1.975^c	1.959^c	1.975^c	1.986^c
Secondary	3.700^c	3.645^c	3.709^c	3.713^c
Higher	5.468^c	5.429^c	5.557^c	5.444^c
Wealth index				
Poorest(r)	1	1	1	1
Poorer	0.633^b	0.628^b	0.636^b	0.634^b
Middle	0.791	0.817	0.787	0.794
Richer	0.988	1.011	0.980	0.989
Richest	1.839^c	1.951^c	1.837^c	1.840^c
Partner education				
No education(r)	1	1	1	1
Primary	0.997	0.982	0.994	0.998
Secondary	1.315^a	1.273	1.315^a	1.317^a
Higher	2.205^c	2.180^c	2.182^c	2.191^c
Read newspaper				
No(r)	1	1	1	1
Yes	1.274^b	1.268^b	1.263^b	1.268^b
Watch TV				
No(r)	1	1	1	1
Yes	1.313^b	1.285^b	1.329^b	1.319^b
Religion				
Muslim(r)	1	1	1	1
Non Muslim	1.492^c	1.536^c	1.518^c	1.482^c
Birth order				
First birth(r)	1	1.	1	1
2nd-3rd birth	0.409^b	0.410^b	0.404^b	0.410^b
4th+	0.185^c	0.185^c	0.183^c	0.187^c
Receive Antenatal care				
None(r)	1	1	1	1
Trained	3.752^c	3.797^c	3.736^c	3.749^c
Untrained	1.687	1.740^b	1.679^b	1.695^b

r : Reference category, ^{a} Significant at 10%, ^{b} Significant at 5%, ^{c} Significant at 1%

NOTES: FSPLI= Final say on purchasing large items, FSPDI= Final say on purchasing daily items, FSOHC= Final say on own health care, FSCHC= Final say on child's health care, FSVFOR= Final say on visits to family or relatives, GHCA=Goes to health centre alone, EDMA= Economic decision making autonomy, HDMA= Household decision making autonomy, FMA= Freedom of movement autonomy, ATDV= Attitude towards domestic violence

Source: Calculated from the 2007 BDHS

Table 5: Binary logistic regression estimates for postnatal care by selected background characteristics and autonomy indicators, BDHS 2007.

Background characteristics	Receive postnatal care							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (ATDV*)	Model 2 (Full)
FSPLI*								
Husband/others (r)	1	1						
Respondent alone	1.161	0.940						
Respondent jointly	1.184[b]	0.855						
FSPDI*								
Husband/others(r)	1	1						
Respondent alone	0.976	1.003						
Respondent jointly	0.984	1.103						
FSOHC*								
Husband/others(r)			1	1				
Respondent alone			1.181	0.963				
Respondent jointly			1.309[c]	1.048				
FSCHC*								
Husband/others(r)			1	1				
Respondent alone			1.525[c]	1.235				
Respondent jointly			1.184[b]	1.002				
FSVFOR*								
Husband/others(r)					1	1		
Respondent alone					1.353[c]	0.977		
Respondent jointly					1.235[c]	1.019		
GHCA*								
No(r)					1	1		
Yes, alone					1.221[c]	1.038		
Yes, with other					1.111	0.995		
Wife beating Justified								
No(r)							1	1
Yes							0.685[c]	0.985
Age								
15-19(r)		1		1		1		1
20-24		0.974		0.976		0.971		0.977
25-29		1.056		1.043		1.046		1.053
30-34		0.936		0.920		0.927		0.934
35-39		1.088		1.056		1.081		1.086
40+		0.852		0.837		0.841		0.847
Division								
Barisal(r)		1		1		1		1
Chittagong		1.041	.	1.016		1.028		1.026
Dhaka		0.630[c]		0.628[c]		0.621[c]		0.621[c]
Khulna		1.107		1.085		1.083		1.087
Rajshahi		0.643[c]		0.638[b]		0.626[c]		0.624[c]
Sylhet		0.857		0.873		0.859		0.852
Background characteristics	Receive postnatal care							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (ATDV*)	Model 2 (Full)

Respondent education								
No education(r)	1		1		1		1	
Primary	1.064		1.048		1.062		1.063	
Secondary	1.380[b]		1.369[b]		1.379[b]		1.375[b]	
Higher	2.063[c]		2.057[c]		2.034[c]		2.037[c]	
Wealth index								
Poorest(r)	1		1		1		1	
Poorer	1.152		1.145		1.149		1.158	
Middle	1.145		1.143		1.144		1.153	
Richer	1.302[a]		1.284[a]		1.304[a]		1.309[a]	
Richest	1.272		1.272		1.267		1.271	
Working status								
Not working(r)	1		1		1		1	
Working	1.025		1.017		1.014		1.011	
Read newspaper								
No(r)	1		1		1		1	
Yes	1.374[b]		1.349[b]		1.373[b]		1.374[b]	
Birth order								
First birth(r)	1		1		1		1	
2nd-3rd birth	0.985		0.977		0.977		0.984	
4th+	0.987		0.985		0.980		0.990	
Receive antenatal care								
None(r)	1		1		1		1	
Trained	2.198[c]		2.181[c]		2.182[c]		2.188[c]	
Untrained	2.372[c]		2.359[c]		2.360[c]		2.341[c]	
Delivery care								
No (r)	1		1.		1		1	
Yes	44.87[c]		43.94[c]		44.754[c]		44.718[c]	

r : Reference category, **a** Significant at 10%, **b** Significant at 5%, **c** Significant at 1%

NOTES: FSPLI= Final say on purchasing large items, FSPDI= Final say on purchasing daily items, FSOHC= Final say on own health care, FSCHC= Final say on child's health care, FSVFOR= Final say on visits to family or relatives, GHCA=Goes to health centre alone, EDMA= Economic decision making autonomy, HDMA= Household decision making autonomy, FMA= Freedom of movement autonomy, ATDV= Attitude towards domestic violence
Source: Calculated from the 2007 BDHS

Table 6: Binary logistic regression estimates of child immunization by selected background characteristics and autonomy indicators, BDHS 2007.

Background characteristics	Child immunization							
	Model 1 (With EDMA*)	Model 2 (Full)	Model 1 (With HDMA*)	Model 2 (Full)	Model 1 (With FMA*)	Model 2 (Full)	Model 1 (With ATDV*)	Model 2 (Full)
FSPLI*								
Husband/others(r)	1	1						
Respondent alone	0.853	0.843						
Respondent jointly	1.195	1.165						
FSPDI*								

Husband/others(r)	1	1						
Respondent alone	1.084	1.103						
Respondent jointly	1.367	1.284						
FSOHC*								
Husband/others(r)			1	1				
Respondent alone			0.857	0.749				
Respondent jointly			1.179	1.029				
FSCHC*								
Husband/others(r)			1	1				
Respondent alone			1.426	1.273				
Respondent jointly			1.725c	1.659b				
FSVFOR*								
Husband/others(r)					1	1		
Respondent alone					1.182	1.151		
Respondent jointly					1.534c	1.400a		
GHCA*								
No(r)					1	1		
Yes, alone					1.129	1.007		
Yes, with other					0.995	1.008		
Wife beating Justified								
No(r)							1	1
Yes							0.669b	0.751a
Division								
Barisal(r)		1		1		1		1
Chittagong		0.339c		0.351c		0.338c		0.340c
Dhaka		0.435b		0.440b		0.442b		0.445b
Khulna		0.592		0.605		0.592		0.603
Rajshahi		0.583		0.578		0.587		0.592
Sylhet		0.303c		0.310c		0.300c		0.300c

Background characteristics	Child immunization							
	Model 1 (With EDMA)	Model 2 (Full)	Model 1 (With HDMA)	Model 2 (Full)	Model 1 (With FMA)	Model 2 (Full)	Model 1 (With ATDV)	Model 2 (Full)
Respondent education								
No education(r)		1		1		1		1
Primary		1.044		1.039		1.039		1.076
Secondary		2.239c		2.229c		2.200c		2.254c
Higher		3.206b		3.177a		3.133a		3.097a
Partner education								
No education(r)		1		1		1		1
Primary		1.388		1.439a		1.397		1.339
Secondary		1.135		1.174		1.124		1.075
Higher		1.766		1.770		1.721		1.679
Working status								
Not working(r)		1		1		1		1
Working		0.798		0.807		0.799		0.801
Birth order								
First birth(r)		1		1		1		1
2nd-3rd birth		1.502a		1.545a		1.490a		1.563b
4th+		1.358		1.439		1.353		1.424

r : Reference category, **a** Significant at 10%, **b** Significant at 5%, **c** Significant at 1%

NOTES: FSPLI= Final say on purchasing large items, FSPDI= Final say on purchasing daily items, FSOHC= Final say on own health care, FSCHC= Final say on child's health care, FSVFOR= Final say on visits to family or relatives, GHCA=Goes to health centre alone, EDMA= Economic decision making autonomy, HDMA= Household decision making autonomy, FMA= Freedom of movement autonomy, ATDV= Attitude towards domestic violence

Source: Calculated from the 2007 BDHS