

# Correlates of Wife Beating Attitudes: The Case of Bangladesh

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Abstract- Using Bangladesh 2011 Demography and Health Survey (DHS), the paper identified correlates of wife beating attitude. Wife beating attitudes are correlated with age, education, employment, age at first cohabitation, husband's education, household wealth, religion and region. We found evidence that women's agency as expressed in her attitude towards woman's right refuse sex if husband has STD is a strong correlate of wife beating attitude with odds ratio of .67. Women's decision making power in the household especially to visit family and relatives is also a strong correlate of wife beating attitude with odds ratio of .81. We found no support for women's decision making power on their own health care as correlates of wife beating attitude. This result is not surprising as women in Bangladesh have wider access to reproductive health services provided by the government and NGOs.

## Introduction

Today development is perceived as a process of “..... expanding freedoms equally for all people”<sup>2</sup> and materializing economic, social and cultural rights of individuals (Duvvury and Nayak, 2003). In this new view of development, gender equality is perceived as a main development objective by and of itself as well as a means to improve productivity and achieve other development outcomes. Over the last century, economic development improved the lives of women across the world by improving educational enrollment, increasing life expectancy and women's labor force participation (World Bank, 2012). Despite these gains, gender inequality persisted in some areas and proved to be an obstacle to progress in the process of development (World Bank, 2012). It is now recognized by international development community that economic development alone cannot close all gender disparities and a renewed interest is underway in designing policies specifically aimed at closing persistent gender gaps. It includes policies to reduce

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<sup>2</sup> World Bank. World Development Report: Gender and Development, 2012. pp 3.

gender gap in human capital, access to economic resources, improving women's voice and agency in private and public sphere as well as addressing intergenerational reproduction of gender inequality (World Bank 2012).

Development as a process of freedom entails women's right to be free from violence. The United Nations define violence against women as “ *any act of gender based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life.*”<sup>3</sup> Violence against women is a gross violation of women's rights and it is estimated that 30% of women around the world experience violence of one form or another in their life time (World Bank, 2014). Though the actual figure varies from country to country and within a country, violence is prevalent in every part of the world- developed or developing - and affects women irrespective of class, race, religion, and ethnicity. The share of women who have experienced intimate partner violence ranges from 21 percent in North America, 28 percent in Australia and New Zealand, 29 percent in Europe and Central Asia, 30 percent in East Asia and the Pacific, 33 percent in Latin America and the Caribbean, 40 percent in Sub-Saharan Africa and Middle East and North Africa, to 43 percent in South Asia (World Bank, 2014). Violence against women matters to development because it violates women's rights, limits women's economic activity and access to resources and economic opportunities, perpetuate gender inequality across generations, affects women's and children's health

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<sup>3</sup> UN General Assembly Resolution 48/104 Declaration on the Elimination of Violence against women, 1993

and is related to prevalence of HIV (Duvvuray and Nayak, 2003; Rani and Bonu, 2009; and OECD 2013).

Marital Violence as one form of violence against women is based on social norms and attitudes, traditional gender roles, power relation in private and public spheres as well as perception of masculinity and femininity (Duvvuray and Nayak, 2003; World Bank, 2014; Boyle et.al., 2009). Lack of women's voice and agency at home and in public sphere as well as intergenerational transmission of gender roles and attitudes is more visible and resistant to change in one area of women's lives- marital violence. It is this persistence of gender inequality and intergenerational transmission of this inequality that ignites the recent commitment of international community to address and change social norms and institutions (World Bank, 2014). Significant strides have been made globally due to international discourse about violence against women that is seen in changes of national laws criminalizing violence against women in general and marital violence in particular. This can be evident by the fact that of the 260 national level legal changes to address intimate partner violence in 119 countries since 1975, 95 percent occurred after 1995 Beijing conference (Perotti, 2013). The effort of international development community in creating awareness about marital violence resulted also in convergence of attitudes rejecting justification of marital violence by women of all ages and locations- in 23 out of 26 countries studied after controlling for economic, social and demographic changes (Pierotti, 2013). Analyzing attitudes towards wife beating and marital violence is relevant in designing intervention points and strategies to address marital violence and change the norms and institutions that perpetuate gender inequality across generations.

This study aims to add to the international and national discourse of marital violence by analyzing wife beating attitudes. Wife beating attitudes are captured by Demographic and Health Surveys (DHS) conducted in many countries around the World. The survey include women's response to five questions about their attitudes towards wife beating: beating is justified if wife goes out without telling husband, neglects the children, argues with husband, refuses to have sex with husband, and burns the food? This paper explores women's perception of martial violence (as it is expressed in their attitude to wife beating), its prevalence, and correlates using Bangladesh 2011 DHS data. Wife beating attitude is based on gender roles, social norms, power relations and perception of masculinity and femininity and a localized studies like this will shed more light to the relative strength of wife beating correlates based on lived experience of women.

The purpose of this paper is to test the relative strength of women's household bargaining power and women's agency measures as correlates of wife beating attitude and the explanatory power of son's preference and institutional variables (religion and region) as correlates of wife beating attitude. Though many studies looked at wife beating attitudes and its correlates, this study provides novel features. First, it is a country level analysis unlike studies that use DHS data for multicounty analysis. It is also different from local village level analysis as the DHS data used in this analysis is a representative survey of the population of the country. Second, this study focuses on the relative importance of women's bargaining power and agency measures as correlates of wife beating attitude taking into account the lived experience of women in Bangladesh. Third, this study takes

another look into son's preference, religion and region as correlates of wife beating attitude. This paper is organized as follows: part one reviews the literature on marital violence, wife beating attitudes and its correlates, part two briefly describes the data, part three presents the results and part four offers a conclusion and policy implication of the findings.

### **The Literature**

A number of studies identified both protective and risk factors of marital violence. Protective factors include but are not limited to women's and men's education, income, women's employment, social support, husband's employment, women's economic opportunity, women's asset ownership especially land and house (Hadi, 2005; Panda and Agarwal, 2005; World Bank, 2014). The risk factors include, poverty, alcohol consumption, early marriage, lack of economic opportunity, polygamy, family history of violence and attitudes towards violence (World Bank 2014; Rani and Bonu, 2009; Panda and Agarwal, 2005). Family history of violence and attitudes towards violence reflect social norms and attitudes and are significant risk factors in explaining prevalence of violence. Experience of violence at young age increases the likelihood of being a victim or a perpetrator of marital violence as an adult with significant intergenerational impact. The extent of both risk and protective factors depend on the relative strength of traditional gender roles, norms and attitudes towards marital violence, power relation in private and public sphere and perception of masculinity and femininity (Jejeebhoy, 1998; Duvvuray and Nayak, 2003; World Bank, 2014; Boyle et.al., 2009).

Acceptance of violence especially wife beating is prevalent in many parts of the world as evidenced by DHS surveys and the responses of both men and women to wife beating questions. In a study of 26 countries and two waves of DHS survey for each country, wife beating is accepted by women ranging from 9 percent in Dominican Republic, 86 percent in Ethiopia to 91 percent in Mali (Pierotti, 2013). Both men and women believe that wife beating is “normal”, “part of married life” and in extreme cases consider it to be the ‘right’ of husband to discipline an erring wife (Jejeebhoy, 1998; World Bank, 2014; Rani and Bonu, 2009). In a cross country study of seven Asian countries, the percentage of women that agree with wife beating ranges from 56 percent in India to 29 percent in Nepal while men agreeing with wife beating range from 56 percent in Turkey to 27 percent in Kazakhstan (Rani and Bonu, 2009). In a study of seven Sub-Saharan African countries using DHS data, Rani, Bonu and Diop-Sidibe (2005) found that the percentage of women who agree with wife beating ranged from 36 percent in Malawi to 89 percent in Mali while the percentage of men who agree with wife beating ranges from 25 percent in Malawi to 75 percent in Ethiopia. Acceptance of wife beating partly explains why women who experience violence shy away from seeking help. In a study done across 30 countries, 60% of women who experience violence did not seek help (World Bank, 2014). The attitude of wife beating as ‘normal’ part of married life is found to be prevalent among the young generations showing the intergenerational transmission of gender inequality (Rani and Bonu, 2009; Rani, Bonu and Diop-Sidibe, 2005). In addressing issues of domestic violence, OECD (2013) report stated that after accounting for quality of domestic violence laws and country income level, the relationship between

attitudes and prevalence of domestic violence remains strong and significant and calls for “...greater focus on attitudes is needed to achieve a change in the level of violence.”<sup>4</sup>

A number of studies have analyzed wife beating attitudes of men and women (Rani, Bonu and Diop-Sidibe, 2004; Rani and Bonu, 2009; World Bank, 2014, Boyle et.al, 2009) and identified its correlates. The correlates of wife beating attitude include education of wife and husband, employment opportunities of men and women, urbanization, wealth and women’s decision making power. As revealed in these studies, changes in attitudes of violence require not only changing socio economic conditions of women, through increasing employment, education, labor force participation, urbanization and legal reforms, but also understanding the relative importance of its correlates and identifying “...entry point for addressing and challenging the deeply rooted inequalities that perpetuate.....”<sup>5</sup> violence. When it comes to attitudes of martial violence, though it is prevalent everywhere in the world, one program or one type of prevention strategy does not fit all. After analyzing wife beating attitude and its correlates in two states in India (Tamil Nadu and Uttar Pradesh), Jejeebhoy (1998) pointed out that correlates of wife beating attitudes and their relative strength differ across culture and locality- mobility is relatively significant correlate in Uttar Pradesh while delayed marriage, asset and mobility are important in Tamil Nadu.

## **Data**

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<sup>4</sup> OECD. Issue Paper: Transforming social Institutions to Prevent violence against women and Girls and Improve Development Outcomes. pp.7. 2013

<sup>5</sup> Voice and Agency: Empowering women and girls for shared prosperity, World Bank, 2014

This study is based on Bangladesh DHS data (2011). Compared to other South Asian countries, Bangladesh is characterized as non-stratified and homogenous country in all linguistic, religious (predominantly Muslim) and ethnic basis. Starting with low per capita income in 1971 (129.41 current US \$), the country achieved remarkable progress in reducing fertility from 6.9 to 2.3 and improving life expectancy at birth from 47 to 69.5 between 1971 and 2010, recorded economic growth in GDP per capita in current US\$ from 129.4 in 1971 to 664.08 in 2010 (and further to 829.25 in 2013), closed the gender education gap in primary education achieving one of the millennium development goals.<sup>6</sup> The country recorded remarkable success in educational attainment - female primary completion rate as a percentage of relevant age group improved from 21.7 % in 1971 to 70.5% in 2010 while male's improved from 34.5% in 1981 to 62.6% in 2010. Gross secondary enrollment of female increased from 10% to 50% while male's enrollment increased from 29% to 57% between 1973 and 2012. The country recorded significant reduction in poverty rate<sup>7</sup> from 57% in 1992 to 32% in 2010 and the percentage of population with access to electricity and improved water sources is 60% and 85% respectively in 2012<sup>8</sup>. Regarding gender equality, Bangladesh's 1972 constitution guarantees equal rights to citizens and prohibit discrimination on the basis of religion, race, sex or place of birth and reserved 15 parliament seats for women. By 1997 30 seats in the parliament, 3 seats in local governments and 10 percent of public jobs are reserved for women.<sup>9</sup> In 2010, women constitute 19 percent of parliamentary seats as compared to 10 percent in 1990 (WDR, 2012). Despite the progress mentioned above,

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<sup>6</sup> The ratio of girls to boys enrollments in primary and secondary school is 108 in 2009 (WDR, 2012).

<sup>7</sup> Poverty rate measured by poverty head count ratio at the national poverty lines (as a percentage of population).

<sup>8</sup> The information is compiled from the World Bank country database.

<sup>9</sup> Whispers to Voices: Gender and Social Transformation in Bangladesh, The World Bank, 2008.

the World Bank (2008) study found out that some gender issues still persist- less than 10 percent of women have their names on marital property, low age at marriage (16 years), son's preference, and violence against women in both private and public sphere. Using quantitative and qualitative data from the World Bank Gender Norm survey (2006), the World Bank study showed that 24% of women aged 45-60 and 30 % of women aged 15-25 experienced spousal violence, and 43% of men surveyed responded being violent with their wives. The same study found experience of spousal violence to be correlated with poverty, younger age at marriage, dowry payment with significant variation across regions.

We used the women questionnaire (Bangladesh, DHS 2011) that covers 17, 842 women who responded to five questions about their attitudes towards wife beating: beating is justified if wife goes out without telling husband, neglects the children, argues with husband, refuses to have sex with husband, and burns the food. Our dependent variable is a dummy variable that takes the value of one if the women answered yes to any of the wife beating question and zero otherwise to capture the overall attitude of women about wife beating irrespective of the reason for the beating<sup>10</sup>. Of 17, 842 respondents, 32.5 percent of women justified wife beating for one reason or another. Women's response to circumstances that evoke wife beating varies from burning food (4%), refusing sex (8%), goes out without telling husband (17%), neglecting children (18%) and arguing with husband (23%)<sup>11</sup>. 94 percent of women are married and 88 percent of married women

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<sup>10</sup> We acknowledge that percentage of women who agree with beating varies from one reason to another.

<sup>11</sup> The DHS data include information about the presence of others for wife beating questions and if they are listening or not. Given the sensitivity of the issue we checked what percentage of respondents answer the

reside with their husband or partner at the time of the survey. The average age at first cohabitation is 16 which is similar to age at first marriage in Bangladesh. 26 percent of respondents have no education, 30 percent have primary education, 36 percent have secondary education and 8 percent have higher education. The majority of respondents are not employed (87 %) and 17 percent of the respondents are classified as poorest. Islam is a major religion (88) followed by Hinduism (11%).

Following Mabsout and Van Satveren (2010) study of women's bargaining power and other studies of wife beating attitudes (Rani and Bonu, 2009; Boyle et. Al., 2009; Hadi, 2005; Panda and Agarwal, 2005; World Bank, 2014 and Jejeebhoy, 1998) the correlates of wife beating attitudes can be grouped into three broad categories: individual, household and institutional level. Individual level correlates include age, education, employment, age at first marriage, number of sons, woman's agency measures - as proxied by membership to women's or microcredit organizations, attitudes towards woman's right to refuse sex if husband has STD and whether a woman ever used or tried anything to delay or avoid pregnancy. Household level correlates include age difference, husband's education, household wealth, and women's bargaining power measures proxied by her power to make or participate in decision regarding her earnings, her health, large household purchases and visit to family and relatives. The institutional level correlates include location of residence (urban/rural), region and religion. Appendix 1 presents description of all variables used in the analysis.

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question with the presence of others, only 8.37% (1493) respondents say they answered the question in the presence of others.

First, we hypothesize that women's household bargaining power measures are not equal in relevance and importance as correlates of wife beating attitude. Given the lived experience of women in Bangladesh- access to reproductive health and related health services provided by the government and NGOS-we would not expect women's health care decision making power to be a strong correlate of wife beating attitude. On the other hand, given mobility constraints of women in Bangladesh, we expect women's decision making power to visit family or relatives to be a strong correlate of wife beating attitude. Second, *women's* agency measures differ in their relative importance as correlates of wife beating attitudes. Given a widespread contraceptive use and membership to microcredit organizations in Bangladesh, we expect a woman's ability to delay or avoid pregnancy or membership to microcredit organization to have low predictive ability of agency and not very significant correlates of wife beating attitude. On the other hand, we expect attitude towards a woman's right to refuse sex if husband has STD to be a significant correlate of wife beating attitude. Women who agree with a statement that a woman has the right to refuse sex if husband has STD display more agency in terms of knowing their rights and as such are more likely to disagree with wife beating. Third, we offer two explanations why number of sons is correlated with wife beating attitude. First, number of sons confers a higher status for women and with this higher status women may uphold gender norms and attitudes and agree more with wife beating justifications. Second, number of sons shows social norms of son's preference. Fourth, given the high level of marriage in Bangladesh (94 percent) we expect religion- as a central institution that defines marriage, ascribes gender roles and enforces social norms -to be a significant correlate of wife beating attitude. We expect regional differences to correlate with wife beating attitude as

regions differ in social norms from conservative to open and vary in economic structures and opportunities to have a bearing on wife beating attitudes.

### **Estimation Results**

Table 2 presents the bivariate relationship between wife beating attitude and its correlates. Women who reject wife beating are more likely to have education, are employed, are married at later age, are married to men who have education, participate in making decision on household purchase and/ or visit to family or relatives, exercise agency – by delaying or avoiding pregnancy, belong to microcredit and agree with a woman’s right to refuse sex if husband has STD. Women who reside in rural areas, who are poor, and with higher spousal age difference are likely to agree with wife beating. The bivariate analysis also shows that number of sons is a significant correlate of wife beating attitude. Women’s ability to decide on own health care is not a significant correlate of wife beating attitude.

We first estimated the multivariate logit regression separately for individual, household and institutional variables as reported in Table 3, 4 and 5 respectively. In the second part, we estimated the multivariate logit regression for three specifications as reported in Table 6. In the last part, we run a sensitivity test by running specification 2 for each region as shown in Table 7. Table 3 presents a multivariate logit regression result of wife beating attitude on individual level correlates. Age, educational attainment, employment, age at first cohabitation, number of sons, and women’s agency as expressed in their attitude towards a woman’s right to refuse sex if husband has STD are all significant. The likelihood of accepting wife beating falls with education and older women are less likely

to accept wife beating with odds ratio of 0.98. We also find employment to be a significant correlates of wife beating attitude with the odds ratio of 0.86. Age at first cohabitation (as a proxy for age at first marriage) is significant with expected sign, women who are married at young age are more likely to accept wife beating. Women's agency as proxied by their attitude towards a woman's right to refuse sex if husband has STD and used methods to delay or avoid pregnancy are significant with the expected sign and odds ratio of 0.61 and 0.93 respectively. Membership in micro credit institutions has the expected sign but is insignificant. Son's preference is significant with odds ratio of 1.04 showing that women who have more sons are likely to accept wife beating. Table 4 presents a multivariate logit regression of household level variables that correlate with wife beating attitude. Husband's education, household wealth, women's decision making power in the household in relation to visit to family or relatives are significant while age difference and women's decision on large household purchases are insignificant. Compared to middle income women, rich women are less likely to accept wife beating with odds ratio of 0.73 while poor women are likely to accept wife beating with odds ratio of 1.14. Our regression result shows a strong support for hypothesis 1- that all women's decision making measures are not equal as correlates of wife beating attitude. Women who make or participate in decision to visit family or relatives are likely to reject wife beating with the odds ratio of 0.77. In contrast, women who make or participate in decision on own health care is more likely to accept wife beating with the odds ratio of 1.17. Women's decision making power with regard to large household purchases is not significantly correlated with wife beating attitude. Given a significant decline in fertility in Bangladesh and women's access to health care through various NGO and government

services, a woman's power to decide on health care will not translate into agency and significantly correlates with wife beating attitude. On the other hand, women who decided or participated in decision to visit family or relatives, given mobility constraints in Bangladesh, show greater decision making power and likely reject wife beating<sup>12</sup>. This finding cautions us not to treat women's decision making power measures equally and the need to account the lived experience of women. Table 5 presents a multivariate logit regression result for institutional level variables. Similar to other studies, we found significant urban/rural differences. Compared to urban women, women in rural Bangladesh are more likely to agree with wife beating with odds ratio of 1.5. The results support hypothesis 4- religion and region are significant correlates of wife beating attitude. Compared to Muslim women, Hindu women are less likely to agree with wife beating and relative to women residing in Dhaka, women who reside in Sylhet, Rangpur, Rajshahi and Chittagong are more likely to agree with wife beating. Further analysis<sup>13</sup> is needed to explain the observed variation across regions as regional dummies capture not only variation in social norms and gender roles but also structure of the economy.<sup>14</sup>

## **Conclusion**

As presented in table six, significant correlates of wife beating attitude include age, education, employment, age at first cohabitation, women's agency as expressed in her attitude towards woman's right to refuse sex if husband has STD , husband's education, household wealth, women's decision making power in the household especially decision

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<sup>12</sup> Tejeebhoy (1998) identified this difference for two states in India.

<sup>13</sup> It is beyond the scope of this paper.

<sup>14</sup> <sup>14</sup> Whispers to Voices: Gender and Social Transformation in Bangladesh, The World Bank, 2008.

to visit family or relatives, location, religion and region. We find a strong support for hypothesis 1, women household bargaining power measures as correlates of wife beating attitude differ in their significance and relative importance. The most significant correlate of wife beating attitude in Bangladesh is woman's ability to participate or make decision on visit to family or relatives. Women who decide alone or jointly with their husbands to visit family or relatives are more likely to reject wife beating with odds ratio of .81. The sensitivity test confirms this result, in all regions decision to visit family or relatives has the expected sign and significant in three states -Khulna, Chittagong and Sylhet (Table 7). Further analysis is required to shed more light on the relative importance of this variable across regions, given women's mobility constraint in Bangladesh. A woman's decision making power on her own health care has unexpected sign and is significant, women who make their own health care decision are likely to agree with wife beating with the odds ratio of 1.2. This result is further substantiated where the coefficient of women decision making power on own health has the unexpected sign in all regions and is significant in three -Khulna, Rajshahi and Sylhet (Table 7). Given the wide spread use of reproductive health care services in Bangladesh, our results show that the explanatory power of women's decision making power measures need to adjust with changing circumstances of women's lives. The third bargaining power measure, decision on large household purchases, has the expected sign but insignificant in the overall regression while significant with expected sign in Barisal and Dhaka but with unexpected sign and significance in Chittagong.

Our analysis found a strong support for the hypothesis that women agency measures differ in their importance as correlates of wife beating attitude. Our results show that

women who agree with woman's right to refuse sex if husband has STD are more likely to reject wife beating with odds ratio of .67. This result is consistent across specifications and significant in all regions except Khulna. Microcredit membership is insignificant in all specifications and all regions. Women's ability to avoid or delay pregnancy has the expected sign but is insignificant in the overall regression and significant in Rajshahi.

Number of sons has the expected sign and is significant in the first two specifications. This is significant indicator of women's dual role as victims and propagators of gender norms reflecting either a woman's social status or social norms of son's preference. As their social status increase, women would likely accept wife beating to uphold social norms. In the third specification, it has the expected sign but is insignificant. Table 8 shows that number of sons has the expected sign in 5 regions and is significant in one (Sylhet) and has unexpected sign in two regions and significant in one (Chittagong). Our findings do not reject hypothesis 3 as number of sons remain a significant correlates in the first two specifications. The inclusion of institutional variables in the third specification changes the significance but not the sign of the coefficient. It suggests further investigation in regional norms and attitudes of son's preference.

The results also showed the existing regional variation in Bangladesh with women in Chittagong, Rajshahi, and Sylhet likely to agree with wife beating compared to women in Dhaka. Regional variations capture regional norms and attitudes as well as economic and social structures. Jejeobhoy's (1998) study of two states in India (Uttar Pradesh and Tamil Nadu) reveal similar results- that structural factors are strong correlates of wife

beating attitude. Though we do not have enough observations for other religions (Buddhism and Christianity) to make definitive conclusion, our evidence shows that religion matters as a correlate of wife beating attitude. The results in Table 6 show that Hindu women are more likely to disagree with wife beating relative to Muslim women. Compared to Muslim women, Hindu women in Chittagong and Christian women in Rajshahi are likely to reject wife beating. Ravi and Bonu (2009) found religion to be an insignificant correlate of wife beating attitude of men in Bangladesh while our study showed the reverse for women's attitude of wife beating.

Changing social norms and attitudes requires in-depth analysis of correlates of wife beating attitude at the country, region or local level. In addition to the common correlates of wife beating attitude, a policy intervention to change attitude and social norms should focus on the lived experience of women and men whose attitude needs to change. It also needs to acknowledge the role of informal institutions such as religion in upholding and sustaining social norms and gender roles. Strategies to change wife beating attitudes can be tailored to variation across regional norms and socioeconomic structures, and target both men and women as both victims and propagators of social norms.

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## **Appendix 1: Description of variables**

**Dependent variable:** Total wife beating response takes the value of 1 if a woman answered yes to any of the wife beating questions and 0 otherwise. It captures the overall attitude of a woman about wife beating irrespective of the reason for the beating. Of 17,842 women surveyed 94% are married, 4 percent are widowed, and 2 percent are divorced or separated. Of those married women (16, 704) 88 percent stated that they are currently residing with their husbands.

### **Age and age square**

**Education:** There are four question related to education that women surveyed answered- level of education, highest years of education, education in single years and educational attainment. For our multivariate analysis, we selected educational attainment as it is a better measure in determining outcome in developing countries context. Our education variable is as ordered variable that takes value of 0= no education, 1= primary education, 2= secondary education and 3= higher education. Of 17,842 women surveyed 26 percent have no education, 30 percent has primary education, 36 percent has secondary education and 8 percent has higher education.

**Employment:** a dummy variable that takes the value of 1 if employed and 0 otherwise.

**Age at first cohabitation:** (as a proxy for age at first marriage)

**Number of sons:** number of sons who reside in the household as well as those who reside somewhere else (as proxy for son's preference)

**Micro credit membership:** membership takes the value of one if a woman is a member of any one of the following groups- Grameen bank, BRAC, BRDB, ASHA, mother's club, other micro credit. 35 percent women surveyed belong to one or more of the above

organization. One short coming of the data is that it shows only membership but not level of participation by those who are members.

**Right to refuse sex if STD:** takes the value of one if a woman responds yes for the question “a woman has the right to refuse sex if husband has STD?” and 0 otherwise.

**Avoid or delay pregnancy:** takes the value of one if answered yes to the question “ever used anything or tried to delay or avoid getting pregnant?” and 0 otherwise.

**Age difference:** husband age-wife’s age

**Husband’s education:** For multivariate regression analysis we use husband’s educational attainment instead of highest years of education. It is an ordered variable that takes a value of 0= no education, 1= primary education, 2= secondary education, and 3=higher education. Of 17,842 women surveyed 29 percent have husbands with no education, 27 percent with primary education, 29 percent with secondary education and 15 percent with higher education.

**Wealth Indicator:** The DHS data has a wealth indicator variable and ranks households into five categories- poorest, poorer, middle, richer and richest. 17 percent women were classified as poorest, 19 percent as poorer, 19 percent as middle, 21 percent as richer and 24 percent as richest.

We constructed a dummy variable Poor that takes the value of one if the household belongs to the poorest or poorer group in DHSs wealth Index and 0 otherwise. The dummy variable rich takes the value of one if the household belongs to the richer or richest group in DHS wealth index and 0 otherwise.

### **Decision making power**

There are three questions women were asked that involves household decision making- person who usually decide on respondent's health care, on large household purchases and on visits to family or relatives. Women's response constitutes respondent alone, respondent and husband, husband/partner alone someone else and other.

**Decision on health care:** takes the value of one if decision on woman's own health care is done jointly or by her and 0 otherwise.

**Decision on large purchases:** takes the value of one if decision on large household purchase is done jointly or by her and 0 otherwise.

**Decision on visit family or relatives:** takes the value of one if decision to visit family and relatives is done jointly or by her and 0 otherwise.

**Rural:** takes the value of 1 if a woman reside in rural areas and 0 otherwise. 65 percent of the respondents reside in rural areas.

**Regional** dummies with Dhaka as a base. 11 percent of respondent reside in Barisal, 16 percent in Chittagong, 17 percent in Dhaka, 15 percent in Khulna, 15percent in Rajshahi, 14 percent in Rangpur and 12 percent in Sylhet.

**Religion** dummies with Muslim as a base. 89 percent of respondents stated their religion as Islam, 11 percent Hinduism, less than one percent Buddhism and Christianity.

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev	No.of obs
Age	30.8	9.27	17842
Highest years of education	3.12	1.56	13203
Age at first cohabitation	15.7	2.98	17842
Number of sons	1.2	1.09	17842
Age difference	9.4	6.6	16704
Husband's highest years of education	3.49	1.55	12625
Employment (percent)	13.3		17842
Decide on earning (percent)	90.6		2101
Contraceptive use (percent)	81.8		17842
Refuse sex if husband has STD (percent)	91.8		17842
Microcredit membership (percent)	35.2		17842
Decide on own health (percent)	63.9		16704
Decide on HH purchase (percent)	60.1		16704
Decide on family visit (percent)	63.0		16704
Rural (percent)	65.3		17842
Poor (percent)	36.1		17842
Rich (percent)	44.7		17842

Table 2: Bivariate relationship between wife beating attitude and selected characteristics

Variable	Wife beating response		P-value
	No	Yes	
Age	30.71	30.93	0.127
Highest years of education	3.185	3.135	0.044
Age at first cohabitation	15.92	15.33	0.000
Number of sons	1.145	1.26	0.000
Age difference	9.34	9.54	0.070
Husband's highest years of education	3.52	3.41	0.0003
Employment (percent)	9	3	0.001
Decide on earning (percent)	65	26	0.002
Contraceptive use (percent)	55	26	0.006
Refuse sex if husband has STD (percent)	63	29	0.000
Microcredit membership (percent)	23	12	0.001
Decide on own health (percent)	43	20	0.208
Decide on HH purchase (percent)	67	32	0.000
Decide on family visit (percent)	67	32	0.000
Rural (percent)	42	23	0.000
Poor	22	14	0.000
Rich	33	11	0.000

Notes: the last column reports p-value for a two tail test. The null hypothesis is equality of means.

**Table 3: Logistic regression of wife beating attitude and its individual level correlates**

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Errors</i>	<i>Odds ratio</i>
<i>Age</i>	-.0238***	.0133	.976
<i>Age Square</i>	.0002	.0002	1.00
<i>Education level</i>	-.2953*	.0205	.744
<i>Employment</i>	-.1462*	.0495	.864
<i>Age at first cohabitation</i>	-.0345*	.0064	.966
<i>Number of sons</i>	.0446*	.0172	1.045
<i>Microcredit membership</i>	.0435	.0347	1.044
<i>Right to refuse sex if STD</i>	-.4965*	.0561	.608
<i>Avoid or delay pregnancy</i>	-.0746***	.0435	.928
<i>Number of observation</i>	17842		
<i>Pseudo R2</i>	0.022		

\*, \*\*, \*\*\* significance at 1%, 5% and 10% level respectively.

**Table 4: Logistic regression of wife beating attitude and its household level correlates**

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Errors</i>	<i>Odds ratio</i>
<i>Age difference</i>	.002	.0025	1.00
<i>Husband Education level</i>	-.187*	.0187	.829
<i>Poor</i>	.131*	.0464	1.14
<i>Rich</i>	-.318*	.0470	.727
<i>Decision on health care</i>	.154*	.0442	1.17
<i>Decision on large purchases</i>	-.036	.0457	.964
<i>Decision on family visit</i>	-.258*	.0460	.772
<i>Number of observation</i>	16696		
<i>Pseudo R2</i>	0.0225		

\*, \*\*, \*\*\* significance at 1%, 5% and 10% level respectively.

Table 5: Logistic regression of wife beating attitude and its institutional/community level correlates

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Errors</i>	<i>Odds ratio</i>
<i>Rural</i>	.4047*	.0350	1.499
<i>Hindu</i>	-.3533*	.0558	.7023
<i>Budhism</i>	.0245	.3498	1.025
<i>Christian</i>	-.2886	.3386	.7492
<i>Barisal</i>	.0736	.0631	1.076
<i>Khulna</i>	-.0350	.0598	.9655
<i>Chittagong</i>	.2246*	.0571	1.252
<i>Rajshahi</i>	.6965*	.0567	2.007
<i>Rangpur</i>	.1028***	.0603	1.108
<i>Sylhet</i>	.4177*	.0613	1.518
<i>Number of observation</i>	17842		
<i>Pseudo R2</i>	0.0193		

\*, \*\*, \*\*\* significance at 1%, 5% and 10% level respectively.

Table 6: Logistic regression of wife beating attitude and its individual, household and institutional level correlates

Variable	Specification 1			Specification 2			Specification 3		
	Coef	Std Err	Odds ratio	Coeff	Std Err	Odds ratio	Coef	Std Err	Odds Ratio
Age	-.024***	.0133	.98	-.017	.014	.98	-.027***	.014	.97
Age square	.0002	.0002	1.0	.0002	.0002	1.0	.0003	.0002	1.0
Education level	-.295*	.021	.74	-.167*	.026	.85	-.156*	.027	.86
Employment	-.146	.049	.86	-.111**	.055	.89	-.096***	.056	.91
Age at first cohabitation	-.035*	.006	.97	-.035*	.007	.96	-.037*	.007	.96
Number of sons	.045*	.017	1.04	.031***	.018	1.03	.024	.018	1.02
Microcredit membership	.043	.035	1.04	-.011	.036	.99	.03	.04	1.03
Right to refuse sex if STD	-.496*	.056	.61	-.48*	.059	.62	-.399*	.06	.67
Avoid or delay pregnancy	-.074***	.043	.93	-.065	.048	.94	-.033	.049	.97
Age difference				-.001	.003	.99	-.0005	.003	.99
Husband Education level				-.077*	.022	.93	-.067*	.022	.93
Poor				.105**	.047	1.11	.125*	.047	1.13
Rich				-.274*	.048	.76	-.236*	.051	.79
Decision on own health				.169*	.044	1.18	.176*	.045	1.2
Decision on large purchases				-.01	.05	.99	-.0003	.047	.99
Decision on family visit				-.24*	.046	.79	-.21*	.047	.81
Rural							.11*	.041	1.11
Hindu							-.26*	.059	.77
Buddhism							.098	.38	1.1
Christian							-.21	.37	.81
Barisal							.049	.067	1.05
Khulna							-.039	.063	.96
Chittagong							.216*	.061	1.2
Rajshahi							.65*	.059	1.9
Rangpur							-.01	.064	.98
Sylhet							.377*	.067	1.46
Number of observations	17842			16704			16704		
Pseudo R2	0.022			0.031			0.042		

\*, \*\*, \*\*\* significance at 1%, 5% and 10% level respectively.

Table 7: Logistic regression of wife beating attitude and its individual, household and institutional level correlates

Variable	Barisal		Khulna		Chittagong		Rajshahi		Rangpur		Sylhet		Dhaka	
	Coef	Std err	Coef	std err	Coef	Std err	coef	Std err	coef	Std err	Coeff	Std err	Coeff	Std err
Age	.051	.043	-.076**	.037	-.014	.037	-.015	.035	-.026	.039	-.08***	.04	-.03	.035
Age square	-.001	.001	.001	.001	.0004	.0005	-0.00	.000	.0002	.0005	.001	.001	.001	.001
Education level	-.34*	.085	.013	.078	.109	.066	-.28*	.065	-.17**	.073	-.22*	.078	-.13**	.067
Employment	-.012	.18	-.164	.153	-.274***	.14	-.047	.128	-.136	.152	.26	.17	.026	.14
Age at first cohabitation	-.015	.023	-.091*	.022	-.025	.017	-.04**	.017	-.02	.02	-.014	.018	-.056*	.018
Number of sons	-.03	.056	.083	.057	-.08***	.045	.072	.049	.019	.052	.08***	.047	.016	.049
Microcredit membership	-.012	.11	-.052	.099	.15	.096	-.115	.89	.066	.097	.004	.12	.098	.093
Right to refuse sex if STD	-.56*	.164	-.213	.23	-.29**	.12	-.40*	.134	-.65*	.198	-.35**	.15	-.53**	.22
Avoid or delay pregnancy	.14	.17	.053	.161	.032	.11	-.28**	.14	-.039	.151	-.13	.11	.16	.132
Age difference	-.002	.008	-.005	.008	.002	.006	.005	.006	-.001	.007	-.002	.006	-.009	.007
Husband Education level	-.011	.07	-.095	.061	-.131**	.055	-.067	.053	-.052	.058	-.087	.067	-.007	.057
Poor	-.031	.132	.423*	.13	.014	.121	.21***	.113	.027	.13	.086	.15	.17	.13
Rich	-.34**	.154	-.25***	.134	-.28**	.12	-.21***	.12	-.076	.15	-.15	.15	-.07	.14
Decision on own health	.002	.14	.44*	.124	.12	.11	.25**	.11	.146	.131	.27**	.13	.089	.113
Decision on large purchases	-.29**	.14	.192	.124	.37*	.12	-.12	.11	-.100	.134	.16	.14	-.27**	.115
Decision on family visit	-.01	.15	-.29**	.126	-.35*	.12	-.003	.11	-.21	.14	-.45*	.14	-.17	.115
Rural	-.05	.12	-.38*	.11	.26*	.097	.06	.099	.019	.11	.27**	.12	.52*	.12
Hindu	-.23	.194	.12	.15	-.35**	.16	-.25	.17	-.39*	.13	-.17	.14	-.66*	.34
Buddhism					-.21	.41								
Christian			.556	.413			-1.9***	1.11						
Number of observations	1964		2475		2694		2480		2319		1902		2863	
Pseudo R2	0.037		0.041		0.036		0.05		0.02		0.047		0.054	

\*, \*\*, \*\*\* significance at 1%, 5% and 10% level respectively.