

Full Length Research Paper

Determinates of early marriage in Bangladesh: An evidence of the nationally representative survey

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Despite the national and international efforts to reduce marriage at earlier age, significant proportion of girls in Bangladesh still marry before reaching legal age of marriage. The aim of this study was to identify the individual-, community- and household- level predictors of early marriage by using the nationally representative data sets to achieve the national picture. This study analyzed the data of 16,830 women extracted from Bangladesh Demographic and Health Survey, 2014 of which 12,740 (75.04%) were getting early marriage. Frequency distribution was used to describe the background characteristics of respondents. Statistically significant determinates of early marriage were calculated by using the Chi-square test. To examine the association between individual-, community- and household level Characteristics of early marriage, I used a series of multivariate regression models with accounting complex survey design. I found respondents education, partner education, respondent socioeconomic condition, region of residence, place of residence, husband occupation, religion and types of family as an important factors of early marriage by Chi-square test. The results of the multivariate logistic regression analysis indicate women with lower education, rural place of residence, women in Rangpur, Rajshai, Barisal and Khulna division, and women in the Muslim community were the greater risk of being early marriage. Additionally, partner lower education, partner lower age, and partner physical and agricultural worker involvement were positively associated with early marriage. Increasing social awareness about the adverse effect of early marriage and protective government law are important to reduce number of early marriage in Bangladesh.

Key words: Early marriage, adverse effect, predictors factors, multivariate logistic regression analysis, Bangladesh.

INTRODUCTION

Despite the improvement of women's social and community dignity; significant proportion of women especially in Asia and Africa are still getting marriage before being matured physically and mentally. Different

culture, religious and socio-economic factors work as a key determinant of such marriage which mostly lead different types of complication including complication during pregnancy and child birth leading to the higher

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maternal and child mortality (Saardchom and Lemaire, 2005). It also frequently violates human right by pushing girls towards uncertain future and deprived from fundamental right including education, and health facilities.

United Nations Children's Fund (UNICEF) set up age above 18 years for female and age above 21 for male as a legal age of marriage (UNICEF, 2007). However, worldwide more than 60 million women in every year marry before reaching legal age of marriage (UNICEF, 2007). Though the net prevalence has decreased worldwide in the last two decades by coupling with strong national and international initiative; it remains pervasive in South Asia, where more than half of all world child marriage is reported (Raj et al., 2009). Additionally, among the South Asian countries, Bangladesh has practiced the traditional culture of early marriage. Around 60% marriages occur in Bangladesh before reaching age 18 years (Sumon, 2014).

Women having early marriage should bear child soon after marriage which is the traditional expectation in Bangladesh (Ahmed, 2001). For that, higher number of pre-mature pregnancy frequently is reported in Bangladesh leading to pregnancy complication, maternal mortality and neonatal mortality. Though accurate estimate regarding such complication and mortality are quite robust in Bangladesh, but different national and international organization mentioned this number is significant (Sumon, 2014).

Every year, worldwide around 529,000 women die due to pregnancy related complication, most of these are earlier aged mother. Similarly higher number of death were also reported among the earlier aged mothers in Bangladesh (Patton, 2009). Additionally, such higher rate of early marriage again creates different social pressure of pubescent girls (Aziz and Maloney, 1985). Most of these are associated with frequent movement, dressing pattern, food habit and their education (Maloney et al., 1980).

Though early marriage is the common issue in Bangladesh as well as others developing countries in Asia and Africa, but the studies on this issue are still lacking. Though some previous studies addressed the determinants of early marriage (Sumon, 2014; Jones, 2010); however, all of these studies are conducted on regional basis only. Still now we are not aware of any country representative study that further contributes to taking appropriate protective policy of early marriage. In this regards, an attempt has been taken in this study to identify the predictor's factors of early marriage by using the nationally representative survey data.

METHODOLOGY

Data sources

The research examined data from 2014 Bangladesh Demographic

and Health Survey (BDHS). Total of 17,863 ever married women aged 15 to 49 years old were interviewed of which 16,830 women provided the information regarding marital age. By using the list of 2011 population and housing census enumeration area, this survey was conducted on 600 EAs across the country; including 207 cluster from urban area and 393 from rural area.

Dependent variable

Respondent's age at marriage was considered as the dependent variable, classified as early marriage if occurred in <18 years old by following international and national classification. Marriage after 18 years old was not reported as early marriage.

Independent variables

Different individual-, household- and community- level characteristics were considered as independent variable. Individual level characteristics were respondents education (illiterate, primary, secondary, higher) and respondents partner education (illiterate, primary, secondary, higher), respondents partner age (≤ 21 , 22 to 30, >30), partner occupation (agriculture, physical worker, services, business, others) and respondents religion (islam, others). Respondents household socio-economic condition measured by wealth index (poorest, poorer, middle, richer, richest) and household size (≤ 6 , >6) were considered as household level characteristics. Finally, region (Barisal, Chittagong, Dhaka, Khulna, Rajshahi, Rangpur and Sylhet) and place of residence (urban, rural) were considered as the community level characteristics.

Statistical analysis

Frequency distribution was used to describe the background characteristics of the respondents. I have used Chi square test to determine the associated factors of early marriage. Finally, we conduct unadjusted and adjusted multivariate logistic regression analysis with adjusting complex survey design. The unadjusted model included only specific variable and early marriage and its adjusted with others possible individual-, household- and community- level characteristics in adjusted model. The result were presented as odds ratio (ORs) and 95% confidence interval (CI).

RESULTS

Among the total sample included this study 16,830.12,740 (75.04%) of women married before the age of 18 years. The majority of the respondents and their husband are primary and secondary level educated (Table 1). Majority of them are richer with the richest socio-economic status (Table 1).

Around two third of the total respondents live in rural area, and either agriculture and physical work were primary sources of their husband income. Chi- square test identified respondent's education, partner education, wealth index, place of residence, region, partner occupation, and types of family and religion as a significant factor of early marriage.

The results of unadjusted and adjusted multivariate logistic regression analysis are present in Table 2. Primary and secondary educated women were 9.89 times

Table 1. Respondents background characteristics and distribution of early marriage by some selected characteristics.

Characteristics	Total (n)	Early marriage		P values
		Yes	No	
Respondents education				<0.001
Illiterate	3715 (22.1)	3197 (25.0)	518 (12.8)	-
Primary ¹	4915 (29.2)	4112 (32.2)	803 (19.9)	-
Secondary ²	6527 (38.8)	4948 (38.7)	1579 (39.0)	-
Higher ³	1673 (10.0)	523 (4.1)	1150 (28.4)	-
Respondents partner education				<0.001
Illiterate	4557 (27.2)	3930 (30.8)	647 (16.0)	-
Primary ¹	4652 (27.7)	3832 (30.0)	820 (20.2)	-
Secondary ²	5031 (30.0)	3748 (29.3)	1283 (31.7)	-
Higher ³	2567 (15.3)	1270 (10.0)	1297 (32.1)	-
Wealth index				<0.001
Poorest	3018 (18.0)	2589(20.2)	429 (10.6)	-
Poorer	3177 (18.9)	2650 (20.7)	527 (13.0)	-
Middle	3426 (20.4)	2740 (21.4)	686 (16.9)	-
Richer	3549 (21.1)	2647 (20.7)	902 (22.3)	-
Richest	3660 (21.8)	2154 (16.9)	1506 (37.2)	-
Place of residence				<0.05
Urban	5739 (34.1)	3952 (30.9)	1787(44.1)	-
Rural	11091 (65.9)	8828 (69.1)	2263 (55.9)	-
Region				<0.001
Barisal	2030 (12.1)	1596 (12.5)	434 (10.7)	-
Chittagang	2707 (16.1)	1917 (15.0)	790 (19.5)	-
Dhaka	2916 (17.3)	2129 (16.7)	787 (19.4)	-
Khulna	2416 (14.4)	1975 (15.5)	441 (10.9)	-
Rajshahi	2389 (14.2)	1963 (15.4)	426 (10.5)	-
Rangpur	2397 (14.2)	1977 (15.5)	420 (10.4)	-
Sylhet	1975 (11.7)	1223 (9.6)	752 (18.6)	-
Husband occupation				<0.001
Agriculture	4496 (26.8)	3772 (29.6)	724 (18.0)	-
Physical	6772 (40.4)	5247 (41.2)	1525 (37.8)	-
Services	1179 (7.0)	522 (4.1)	657(16.3)	-
Business	3763 (22.4)	2794 (21.9)	969 (24.0)	-
Others	365 (3.4)	409 (3.2)	156 (3.9)	-
Religion				<0.001
Islam	15200 (90.3)	11703 (91.6)	3497 (86.4)	-
Others	1626 (9.7)	1076 (8.4)	550 (13.6)	-
Types of family				<0.001
<=6	12742 (75.7)	9778 (76.5)	2964 (73.2)	-
>6	4088 (24.3)	3002 (23.5)	1086 (26.8)	-
Total	16.830 (100%)	12.740 (75.04%)	4.090(24.96%)	-

Note: The numbers inside the parentheses represent the percentages,¹ Primary completed is defined as completing grade 5, ² Secondary completed is defined as completing grade 10, ³Wealth index measure the socio economic status.

Table 2. Determinants factors of early marriage.

Characteristics	Unadjusted	Adjusted
Respondents education		
Illiterate	14.37 (11.78-17.54)	9.89 (7.74-12.62)
Primary	11.41 (9.53-13.67)	8.13 (6.61-7.00)
Secondary	6.76 (5.81-7.86)	5.57 (4.70-6.62)
Higher	1.00	1.00
Respondents partner education		
Illiterate	6.19 (5.04-7.59)	1.81 (1.40-2.35)
Primary	4.30 (3.72-4.99)	1.52 (1.28-1.80)
Secondary	2.91 (2.57-3.29)	1.32 (1.14-1.54)
Higher	1.00	1.00
Respondents partner age (in years)		
≤21	2.64 (1.64-4.23)	2.96 (1.81-4.84)
22-30	0.93 (0.84-1.01)	1.09 (0.97-1.22)
>30	1.00	1.00
Respondent socioeconomic condition		
poorest	1.53 (1.23-1.90)	1.04 (0.86-1.27)
poorer	1.12 (0.94-1.33)	0.88 (0.74-1.06)
Middle	1.00	1.00
Richer	0.76 (0.65-0.88)	0.94 (0.80-1.11)
Richest	0.39 (0.34-0.45)	0.88 (0.73-1.07)
Place of residence		
Urban	1.00	1.00
Rural	1.80 (1.54-2.11)	1.13 (0.97-1.33)
Region		
Barisal	1.27 (1.00-1.64)	1.60 (1.24-2.07)
Chittagang	0.78 (0.62-0.97)	0.80 (0.66-0.97)
Dhaka	1.00	1.00
Khulna	1.61 (1.32-1.96)	1.79 (1.51-2.14)
Rajshahi	1.40(1.44-2.19)	1.80 (1.48-2.19)
Rangpur	1.90 (1.57-2.30)	2.00 (1.66-2.41)
Sylhet	0.55 (0.44-0.70)	0.42 (0.34-0.52)
Husband occupation		
Agriculture	6.46 (5.25-7.95)	1.29 (1.04-1.61)
Physical worker	4.34 (3.66-5.13)	1.24 (1.01-1.52)
Services	1.00	1.00
Business	3.54 (2.97-4.22)	1.22 (0.98-1.51)
Others	3.40 (2.57-4.49)	1.09 (0.82-1.47)
Household size (in number)		
≤6	1.21 (1.08-1.35)	1.04 (0.91-1.19)
>6	1.00	1.00
Religion		
Islam	1.98 (1.59-2.48)	2.04 (1.69-2.51)
Others	1.00	1.00

(AOR, 9.89; 95% CI, 7.74 to 12.62) and 8.13 (AOR=8.13, 95% CI, 6.61 to 7.00) times more likely to early marriage compared to non-educated women. However, we found the protecting role of higher education on early marriage. Husband education found another important determinant of early marriage by providing the evidence that more educated male were less likely interested to marry girl before reaching age 18 years. Result also showed that illiterate (AOR, 1.81; 95% CI, 1.40 to 2.35), primary (AOR, 1.52; 95% CI, 1.28 to 1.80) and secondary (AOR, 1.32; 95% CI, 1.14 to 1.54) male were more likely interested in early marriage. Husband early age ≤ 21 were also found around 2.96 times (AOR, 2.96; 95% CI, 1.81 to 4.84) higher risk of early marriage. In this study, we did not found any significant effect of respondents socio-economic condition on early marriage though this risk were slightly higher among the women in poorest (AOR, 1.04; 95% CI, 0.86 to 1.27) socio-economic condition. This risk was found as protective among the respondent's richest and richer socio-economic condition.

This study also found the women living in rural area were more likely to marry at earlier age (AOR, 1.13; 95% CI, 0.97-1.33) as compared to their urban counterparts. We also found the regional difference of early marriage in this study. We found women lived in the Barisal division (AOR, 1.60; 95% CI, 1.24 to 2.07); Khulna division (AOR, 1.79, 95% CI, 1.51 to 2.14), Rajshahi division (AOR, 1.80, 95% CI, 1.48 to 2.19) and Rangpur division (AOR, 2.00, 95% CI, 1.66 to 2.41) reported the significant higher risk of getting early marriage compared to the women in Dhaka division. However, this risk is significantly lower among the women in Chittagong division (AOR, 0.80, 95% CI, 0.66-0.97) and Sylhet division (AOR, 0.42, 95% CI, 0.34 to 0.52).

Significant higher odds of early marriage were also found among the women with husband in agricultural worker (AOR, 1.29, 95% CI, 1.04-1.61) and physical labor (AOR, 1.24, 95% CI, 1.01-1.52). I also found religious impact on early marriage; the odds of early marriage around 2.04 times (AOR, 2.04, 95% CI, 1.69-2.51) higher among Muslim community as compared to the Non-muslim community.

Findings of this study revealed that women education, their husband education, their socio-economic condition, place of residence, region, household food security and types of family were found to be important factors of early marriage.

DISCUSSION

In this, the first nationally representative study in Bangladesh we investigated the Individual-, household- and community- level determinants of early marriage in Bangladesh by using the nationally representative 2014 BDHS data. I found respondents and their husband lower education, husband age, place of residence and

region, husband occupation, and religion were the significant predictors of early marriage in Bangladesh.

In this study, I found the educational influential on early marriage by stating that primary and secondary educated women were more likely to be involved in early marriage. Previous regional study conducted in Bangladesh also found similar result (Sumon, 2014). Bangladesh recently awarded to achieve the currently ended Millennium Development Goal 3 (Hogan et al., 2010) by balancing equal enrollment in education. Participation of women with lower socio-economic status in the formal education stream contributed to such prestigious achievements. However, majority of the schools enrolled girls who have completed only primary or secondary level of education, and has got early marriage. Recent statistics showed only 5% of women completed secondary education successfully instead of the total 33% enrollment (Rahman, 2013). Higher rate of early marriage are frequently cited among the dropped out girls [4].

Administratively, Bangladesh has seven divisions with significant cultural differences. Also significant variations in the socio-economic condition observe in these region might be influenced on the pattern of marriage. In this study, we found women in Rangpur, Barisal, Rajshahi and Khulna division were more likely to get marriage at earlier age. However, exception is reported in case of Sylhet and Chittagong division where the early marriage rate were significantly lower as compared to others region in Bangladesh. Multiple factors contributes such regional disparity having socio-economic condition, cultural belief and traditional norms as the most significant (Jones, 2010). Specifically, traditional norms of Bangladeshi population that significantly varied by region based on regional overall education status are another factors that encourage early marriage in some region (Uthman, 2008). Others possible causes of early marriage may be laid on regional poverty which is more common in northern region (Rangpur division) in Bangladesh on which early marriage rate are also higher (Dahl, 2010). Government initiative reduce regional variation and working opportunity especially for the female which leads to the removal of poverty which may be effective to reduce such higher rate of early marriage and geographical disparities (BBS, 2011).

Place of residence also found another important predictors of early marriage; this study found women in rural area were more likely to be involved in early marriage compared to their urban counterparts. Previous studies conducted in Bangladesh (Sumon, 2014) as well as other Asian country also found similar result (Dahl, 2010; Santhya, 2011).

Multiple factors have contributed such disparities between the residence having education as one of the important factors. A recent survey of BBS conclude that around 51.81% women aged five years or more were educated in rural area instead of 65.83% women in urban

area (BBS, 2011). Such higher education enrollment rate in urban area have provided the opportunity to get different form of paid work contribute to inverse setup of mind with early marriage (Santhya, 2011). Access with proper entertainment facilities in urban areas are another important causes of lower early marriage in urban area. However, most of the village areas in Bangladesh is very remote and having only limited access to the mass media. Such lacking contributes to transforming human mind regarding early marriage while they consider marriage as the sources of entertainment. Besides these, majority of rural women have only limited access on mass media including televisions, newspapers which mostly play the negative role against early marriage. On the contrary, accessibility of mass media creates awareness regarding the related complications of early marriage including mothers health complication and newborn health complication.

By coupling with individual and regional characteristics, respondents husband socio-economic background also found as an influential factors of early marriage. Men involved with physical and agriculture work have lower income which represents the poorest and poorer socio-economic background that leads to the occur of more early marriage. I am not able to justify my result due to the absence of appropriate literature. However, husband's improved socio-economic condition was found to be protecting factor against earlier ages marriage. Similar findings found in previous studies conducted in Bangladesh (Sumon, 2014) and others Asian countries (Aryal, 2007; Singh and Samara, 1996). Again, parents with lesser income found it difficult to bear living cost of adolescent girls, and they intended to marry their child out as soon as possible. Another important causes of early marriage have rooted in its traditional norms that husband must have senior sons compared to wife. For this, majority of the men reaching marital age suddenly or before gets married leading to early marriage (Sumon,2014).

Additionally, lack of appropriate knowledge about adverse effect of early marriage among poorer and poorest groups sometimes works as a fuel to increase such prevalence (Singh et al., 2012). Appropriate government initiative to increase the social awareness regardless of the socio-economic division should be effective to reduce such disparity as well as reduce early marriage (Singh and Samara, 1996).

In this study, we also found important role of husband education on getting early marriage; lower educated husband were more likely to be involved in early marriage compared to the educated one. Lack of previous national level study limit our opportunity to justify this finding though some regional studies in Bangladesh (Sumon,2014; Field and Ambrus, 2008) and other countries (Nour, 2009; Uecker and Stokes, 2008; Isen and Stevenson, 2010) have supported this study findings. Other previous studies claim that this is due to

the lack of awareness regarding adverse effect of early marriage (Raj et al., 2009; Nour, 2009). Again men always have showed his desire for getting married with women having less education compared to their own level. As a result, men having secondary education choose a girl with secondary or below secondary level which ultimately leads to early marriage.

Partner occupation was also found to be another important factor associated with early marriage. Previous study conducted in Bangladesh (Sumon,2014) and Pakistan (Khan and Khan, 2009) also found similar results. Result of this study indicates that physical workers and agricultural persons are more likely to be involved in early marriage compared with the partners having different form of services. However, similar tendency was also reported among husband with business occupation groups. The lower level of education among these physical worker, businessmen and agricultural worker leads to such findings (Khan and Khan, 2009) Manpower needs among these groups to work in the field or house is another significant factor leading to early marriage (Finch, 2012).

This study has identified religion as another important determinant factor of early marriage; having higher rate of early marriage among Muslim community compared to the non-Muslim. Lack of appropriate literature in this perspective limits our opportunity to justify our findings. But one recent meta-analysis also found similar result after reviewing the paper published between 1980 and 1990 (Mahoney et al., 2008). Previous studies reported Muslim parents are also more likely to marry their daughter earlier compared to the others religious groups due to the lack of social safety and religious restriction (Mahoney et al., 2008; Fogleman, 2014). Appropriate religious based education and proper explanation about the appropriate age at marriage present in the Muslim religious are consider as important aspect to reduce such negative practice among the Muslim families.

Conclusion

This study demonstrates that the respondents education, respondents partner education, respondents partner age, region of residence, place of residence, partner occupation and religion as determinants factors of early marriage. Increase awareness about the adverse effect of early marriage and proper execution of the existing law might play significant role to reduce proportion of early marriage.

STRENGTH AND LIMITATION

This study has several strength and limitation. The main strength of this study is availability of the nationally representative data. Also this study used the appropriate

statistical analyses which produced the better findings. However, the major limitation in this study were raised due to the cross sectional nature. BDHS collected marriage data age by asking respondents rather than based on any documents. This form of data collection procedure sometimes leads to recall bias.

Conflict of Interests

The author did not declare any conflict of interests.

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