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Thesis Report on Prevalence of Early Marriage And Associated Factors Among Women In Bangladesh: A Cross Sectional Study

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Prevalence Of Early Marriage And Associated Factors Among Women In Bangladesh: A Cross Sectional Study

1. Abstract

Bangladesh is one of the most densely inhabited countries in the world where population growth rate is 0.98% percent (Wikipedia) and Early marriage is one of the key factors of population growth. Early marriage is defined as any marriage occurred below the age of 18 years, before the girl is psychologically, physically, and physiologically ready to take the responsibilities of marriage and child bearing. This marriage has intense health hazard and are reported to have early, frequent and unplanned pregnancies that are associated to increased risk for maternal and infant morbidity and mortality. Bangladesh has been ranked 4th in terms of highest rate of early marriage before age 18 years among the other countries in the world. This study objectives to determine the prevalence and determine associated factors of early marriage in Bangladesh using 17004 women aged 20-49 years from the Bangladesh Demographic and Health Survey 2017–18. Descriptive statistics, chi square tests, and multiple logistic regression analysis were carried out to analyze data. Result shows that 71.8% women were married before 18 years. Bivariate analysis of chi-square tests shows that all the independent variables have a significant effect on age at first marriage. Multiple logistic regression analysis indicate that respondents and partner education, place of residence, religion , divisions, , and working status of women   were the greater risk of being early marriage. Policy interventions need to address culturally-laden social norms influenced by religious-related beliefs, increase social security, and strictly monitoring the marriage law especially in rural areas.

Keywords: Prevalence, early marriage , education, religion. logistic regression , Bangladesh.

2. Background

According to the UNICEF, early marriage is defined as any marriage occurred below the age of 18 years, before the girl is psychologically, physically, and physiologically ready to take the responsibilities of marriage and child bearing [1] . Globally around 21% of young women were married before their 18th birthday [2] . Early marriage around the world is associated with many harmful consequences, including health dangers associated with early pregnancy,

lower educational achievement for girls who marry earlier, a higher incidence of spousal violence, and an increased likelihood of poverty [3]. Women married at young age have intense health hazard and are reported to have early, frequent and unplanned pregnancies that are associated to increased risk for maternal and infant morbidity and mortality [4] . Early marriage places children at high risk of violence, exploitation, and abuse and also violates children's rights [5]. The risks of marriage at early age are not just limited to the girl alone, but also to the child that is born to her as a result of an unplanned early pregnancy. One in fifteen children in India dies before the 1st birthday as compared to one in 200 children across the developing world [6]. The extent of early marriage varies between countries and regions. The highest rates are reported in South Asia and Sub-Saharan Africa, where 44% and 39 % of girls, respectively, were married before the age of 18. Bangladesh is no exception in this regard [7] . A study was conducted in Iran in 2013 where revealed that the mostly important factors of early marriage in rural areas were traditional issues and low awareness of female child and their parents about the risk of early marriage and cultural poverty, negative attitude towards continuation of female education, freedom from rigid and undesirable rules of parents, and lower authority of girls and deficiency of power to make decision [8] According to the report of UNICEF 2017 the Bangladesh has been ranked in 4th in terms of highest rate of early marriage before age 18(estimated on women aged 20-24 in 2017) among the other countries in globally [9] .The SDG indicators 5.3 is " Eliminate all harmful practices such as child, early and force marriage and genital mutilation", and unless we end the early marriage by 2030 we will not achieve 8 of 17 Sustainable Development Goals (SDG) which was set by the United Nations(UN) in 2015 [10]. The legal age of marriage in Bangladesh is 18 years for a female Under the Child Marriage Restraint Act (1929) [11]. This law replaced by a new law which was approved by the Bangladesh parliament on 27th February , 2017, that permits girls under age 18 to marry under "special circumstances," with permission from their parents and a court. There is no minimum age for these marriages. This law is a destructive step backward for the fight against child marriage in Bangladesh [12] . The proportion of women age 18 declined from 73% in 1993-94 to 65% in 2011 and 59% in 2014 [13]. A study in Khulna district reveled that socio-cultural factors , economic factors, areas of residence has a strong significant association with early marriage [14]. Another study found that in the high patriarchal societies , the husband's education is likely to matter as much as that of the wife. Husband with low education have greater chances of having wives of younger age, generally who are assigned traditional female roles. Therefore, postulate that women with husbands with few years of schooling marry earlier than those husbands with more years of schooling

[15]. Poverty, girls protection, honor of family, and the provision of stability during unstable social periods are predicted to be significant factors in determining the causes of early marriage [16]. As for the consequences of early marriage, Plan International found that poor health due to early pregnancy, an inability to manage a relationship in the marital home and stopping education were the most common outcomes of early marriage in Bangladesh [17]. The Center for Reproductive Rights (2010) revealed that higher prevalence of unwanted pregnancy, complications associated with early pregnancy, violence and discrimination, little or no ability to leave abusive partners and a lack of capability to secure legal and social support were major outcome of early marriage [18]. It is considered that, early marriage is a violation of human rights of the girls and it deprives her from freedom because they cannot complete their education. [19]. In a study about the incident of early marriage in India found that early marriage of girls is a barrier to their education [20]. They investigated the causes of early marriage as protection of young girls, economic survival, socio-cultural, religious values and regulation of female behavior [20]. Poverty is one of the major factor considered early marriages. When poverty comes knocking on the door, a young women may be considered as an economically burden and parents arrange early marriages for their daughters as an alternative way to reduce this burden [21]. Poverty inspired poor parents to put on early marriage for their daughters, the higher the poverty rate, the higher the early marriage rate but if the financial condition is better the rate of early marriage is lower [22]. On 11th March in 2020, World Health Organization announced Covid 19 as the pandemic diseases [23]. This pandemic has severely altered life for communities around the world and Bangladeshis like other countries around the world, faced financial sufferings due to the pandemic, and are leaning to early child marriage as a means to decrease the economical burden of supporting their children [24]. Despite significant achievement in female education, maternal mortality, female empowerment, rate of early marriage did not decline in a way that was expected. Therefore this study is initiated to identify the factors which are responsible for early marriage using the most recent nationally representative dataset bdhs 2017-18.

3. Objectives of the study

3.1 General objectives

To explore the factors which are associated with early marriage among women in Bangladesh

3.2 Specific objectives

1. To determine the prevalence of age at first marriage.

2. To find the percentage of different socio-economic and demographic factors affecting on age at first marriage.

3. To find out whether different socio-economic and demographic factors have any association with age at first marriage in the countryside of Bangladesh.

4. Methodology

4.1 Data source

Nationally representative cross-sectional data from the more recent Bangladesh Demographic and Health Survey (BDHS) 2017-18 were used for this study .2017-18 BDHS covered total population living in non-institutional dwelling units in Bangladesh. This is the eighth round national-level survey to report on demographic and health situation if women and children. Six types of questionnaires used the BDHS2017-18. (1) the Household Questionnaire, (2) the Woman's Questionnaire, (3) the Biomarker Questionnaire, (4) two verbal autopsy questionnaires to collect data on causes of death among children under age 5, (5) the Community Questionnaire, and (6)the Fieldworker Questionnaire. [25]. For the purpose of the study women questionnaire were used. As the data is publicly available, ethical approval was not required.

4.2 Sample selection:

BDHS 2017-18 used a two-stratified sampling method to collect nationally representative data for Bangladesh.

The sampling frame of the study based on the 2011 Population and Housing Census of the People's Republic of Bangladesh, provided by the Bangladesh Bureau of Statistics (BBS 2011) [25]. In the first stage, EAs(enumeration areas) , the primary sampling unit, were extracted from the census information. Enumeration areas based on the lowest administrative areas of Bangladesh: Mouzas (rural) or Mahallas (urban), comprising 120 households on average. 675 EAs (250 from urban and 425 from rural) selected with probability proportional to the EA size. A systematic sampling of 30 households on average per EA was selected in the second stage. A total of 20,127 ever-married women were interviewed with a response rate of 98.8%. A pre-design questionnaire was developed to use as data collection

instrument. The questions were a combination of closed ended and open-ended questions. Trained and experienced interviewers were assigned for interviewing the participants .The Woman's Questionnaire collected the following information from ever-married women age 15-49. Women answered to questions on the following topics: * Socio demographic characteristic (age, education, religion, media exposure and respondent's working status) * Marriage and sexual activities. * Husbands' background characteristics . The survey period was 4 months (from October 24, 2017 to   March 15, 2018). For the purpose of the study, ever-married women age 15-49years were selected , that counts as N. After extracting the relevant variables and omission of responses for missing values (case wise deletion) including cleaning the data , the final sample size for this study was17004.

4.3 Ethical consideration:

BDHS 2017-18 is a publicly available dataset and can be downloaded from the DHS Program web- site . Before analyzing the dataset I received an approval from the MEASURE DHS program office. As this data is publicly available, ethical consideration was not needed for this study. According to the DHS, written informed consent was taken from all respondents before they enrolled in the survey. Before starting the study, the procedure elaborately discussed with respondents and only after getting full consent from them, the study was conducted.

4.4 Data management and analysis plan:

4.4.1 Dependent variable:

The 2017-18 BDHS does not directly contain any variable on the status of early marriage. However, the dataset gives information on participant's age at first cohabitation or marriage which is a continuous variable and was categorized to binary variables.This study computed marriage age under the age of 18 as early marriage.

4.4.2 Independent variables:

Independent variables included respondent's current age, working status, religion(Muslims and others), respondent's and husband's education level ,division(Barishal, Chattogram , Dhaka , Khulna , Mymensingh , Rajshahi , Rangpur, and Sylhet.), place of residence (rural, urban), wealth index, exposure to media and husband's occupation . Husband,s occupation

was classified as unemployed (didn't work, household and domestic) ,professional , agriculture (agriculture employee, agriculture self-employed), skilled/ semiskilled, small business(clerical. sales, services). Reading newspaper, listening to radio, and watching television, these three variables are combined to make media exposure which was classified as not at all, less than once week, at least once a week. Wealth index was classified as per the DHS guideline into 'poorest', 'poorer', 'middle', 'richer' and 'richest. Sample weight used to weight the data which provided by the BDHS database. All of the 17,004 ever-married women included in the descriptive analysis .Sample weight used to weight the data which provided by the BDHS database. All of the 17,004 ever-married women included in the descriptive analysis. Chi-square test was done to find any association of age at first marriage and independent variables. multiple logistic regression analysis was used to identify the factors associated with early marriage expressed as an odds ratio (OR) with 95% CI .Unadjusted odds ratio were attained by considering the effect of only one predictor variable while adjusted odds ratios were gained by including all influential variables included in the regression model and results were explained as statistically significant at a p- value of <0.05.

4.4.3   Data management software

All statistical analysis was done under the software program SPSS 22 (Statistical Package for Social Science version 22).

5. RESULT

Table 1 shows the demographic and socioeconomic characteristics of the respondents.

Among the total sample (17004) included this study 12217(71.8%) women married before the age of 18 years. The majority of the respondents are primary and secondary level educated (32.4%), (37.0%) and 16.2% respondents have no education. Most of the respondent's partners also have primary (30.9%) and secondary (28.5%) level education and 22.5% have no education. The study revealed that most of the respondent current age group is in the 25-29 (20.2%) and lowest participants are in the age group of 45-49 (12.5%). In the analysis, among religion majority of the respondents are Muslims (89.6%). Around two third of the total women (63%) live in rural area. Among eight divisions, the study found that most of the respondents are from Dhaka division (14.9%) and the lowest respondents are from Barisal division (10.6%). Majority of participants are richer with the richest socio-economic

status (20.2% and 23.2%) and 18.5% are from poorest. Currently working status almost same in the working (49.7%) and not working women (50.3%).The study also found that 2.5% respondent's husband are unemployed and (30.1%) are engaged in small business. Moreover 64.4% women have media exposure at least once a week and 34.5% respondents have no media exposure.

Table: 1 Frequency distribution of socio demographic factors.

variables	Percentages	N(numbers)
Age at first marriage		
Marriage before 18	71.8	12117
Marriage at age 18 & more	28.2	4787
Respondent education		
No education	16.2	2752
Primary	32.4	5502
Secondary	37.0	6294
Higher	14.4	2456
Husband education		
No education	22.5	3867
Primary	30.9	5251
Secondary	28.5	4848
Higher	17.9	3039
Respondent current age		
20-24	20.0	3394
25-29	20.2	3431
30-34	19.4	3293
35-39	16.2	2751
40-44	12.5	2122
45-49	11.8	2013
		Continue…….

Religion		
Others	10.4	1763
Islam	89.6	15241
Place of residence		
Urban	37.0	6291
Rural	63.0	10713
Division		
Barisal	10.6	1797
Chittagong	14.3	2432
Dhaka	14.9	2534
Khulna	13.1	2233
Mymensing	10.8	1836
Rajshahi	12.8	2178
Rangpur	12.4	2114
Sylhet	11.1	1880
Wealth index		
Poorest	18.5	3149
Poor	18.7	3179
Middle	19.2	3257
Rich	20.4	3468
Richest	23.2	20.4
Respondent working status		
No	50.3	8559
Yes	49.7	8445
Husband occupation		
Unemployed	2.5	430
Professional	9.2	1564
Agriculture	25.2	4302
Skilled/ semiskilled	27.8	5595
Small business	30.1	5113
		Continue….

Media Exposure		
Not at all	34.5	5859
Once a week	1.2	197
At least once a week	64.4	10948

Bivariate analysis

Results of bivariate analysis of age at first marriage as the dependent variable with other independent variables are shown in **Table2 .** In bivariate analysis we consider measure of association with Pearson Chi -square Test. In this analysis, the Chi-square test clarifies that respondent's education, partner education, place of residence ,division, ,religion , media exposure, respondent currently working status , husband occupation and finally wealth index as a significant factors ($p < 0.001$) for early marriage . Table 2 reveals all the independent variables that at 5% level of significance can be considered as a high potential factor of early marriage.

Table 2: Bivariate analysis for the dependent variable age at first marriage by independent variables

variables	Age at first marriage		Total%	Numbers	P Value
	Marriage before18 years %	Marriage at age 18 & more%			
Respondent age					0.000
20-24	18.7	23.1	20.0	3394	
25-29	19.0	23.3	20.2	3431	
30-34	19.5	19.0	19.4	3293	
35-39	16.5	15.2	16.2	2751	
40-44	13.3	10.4	12.5	2122	
45-49	13.0	9.0	11.8	2013	
Total	100.0	100.0	100.0	17004	
					Continue…

Respondent education					
No education	19.4	8.0	16.2	2752	
Primary	36.5	21.8	32.4	5502	
Secondary	38.2	33.9	37.0	6294	0.000
Higher	5.9	36.9	14.4	2456	
Total	100.0	100.0	100.0	17004	
Respondent working status					0.000
No	46.3	66.6	50.3	8559	
Yes	53.7	39.4	49.7	8445	
Total	100.0	100.0	100.0	17004	
Religion					0.000
Others	7.9	16.7	10.4	1763	
Islam	92.1	83.3	89.6	15241	
Total	100.0	100.0	100.0	17004	
Division					0.000
Barisal	11.2	9.1	10.6	1797	
Chittagong	13.4	16.5	14.3	2432	
Dhaka	14.0	17.1	14.9	2534	
Khulna	14.1	10.6	13.1	2233	
Mymensing	11.4	9.3	10.8	1836	
Rajshahi	14.4	8.9	12.8	2178	
Rangpur	13.6	9.4	12.4	2114	
Sylhet	7.9	19.2	11.1	1880	
Total	100.0	100.0	100.0	17004	
Place of residence					0.000
Urban	33.5	45.9	37	6291	
Rural	66.5	54.1	63	10713	
Total	100.0	100.0	100.0	17004	
Wealth index					0.000
Poorest	21.2	11.7	18.5	3149	
Poor	20.5	14.1	18.7	3179	Continue…

Middle	20.8	14.8	19.2	3257	
Richer	19.9	21.6	20.4	3468	
Richest	17.5	37.7	23.2	3951	
Total	100.0	100.0	100.0	17004	
Media exposure					0.000
Not at all	37.7	26.2	34.5	5859	
Once a week	1.1	1.4	1.2	197	
At least once a week	61.3	72.4	64.4	10948	
Total	100.0	100.0	100.0	17004	
Husband education					0.000
No education	12.3	26.8	22.7	3865	
Primary	34.1	22.7	30.9	5252	
Secondary	28.1	29.6	28.5	4848	
Higher	11.0	35.3	17.9	3039	
Total	100.0	100.0	100.0	17004	
Husband occupation					0.000
Unemployed	2.6	2.5	2.5	430	
Professional	5.5	18.6	9.2	1564	
Agriculture	28.7	16.4	25.2	4302	
Skilled/semi skilled	33.3	31.9	32.9	5595	
Small business	29.9	30.6	30.1	5113	
Total	100.0	100.0	100.0	17004	

Multivariate analysis

Since the dependent variable , age at first marriage is a binary variable , we consider logistic regression model. Logistic regression analysis was conducted to determine the risk factors with the independent variable. A two-tailed p value of 0.05 was considered significant at the 95% CI (Confidence Interval) level. The results of unadjusted (Model- I) and adjusted (Model-II) multivariate logistic regression analysis are present in **Table 3**. Primary , secondary and higher educated women were [AOR = 0.747 , 95% CI=(0.650 to 0.859)],

[AOR= 0.560 , 95% CI= (0.481 to 0.651)], [AOR=0.088, CI(.073 to 0.107)] less likely to get early marriage compared to un-educated women. Education of husband found another important determinant of early marriage by providing the evidence that educated male were less likely interested to marry girl before reaching age 18 years compared to un-educated men . Result showed that primary [AOR= 0.850, 95% CI(0.753 to 0.960)] and secondary [AOR= 0.736, 95% CI(0.645 to 0.839)] and higher education [AOR= 0.573, 95% CI(0.485 to 0.676)]. Study found that women who are engage in work [AOR= 1.196, 95% CI(1.101 to 1.298)] more likely to have married before 18 years. This data analysis also found the women living in urban area were less likely to marry at earlier age [AOR= 0.880, 95%CI(0.804 to 0.962)] compared to their rural counterparts. I also revealed that the divisional differences of early marriage in this study. I found women lived in the Barisal division [AOR= 1.564, 95% CI(1.333 to 1.834)] Khulna division (AOR, 1.806, 95% CI, 1.556 to 2.097), Mymensing division [AOR= 1.303, 95% CI(1.114 to 1.524)] Rajshahi division [AOR=1.835, 95% CI(1.573 to 2.142)] and Rangpur division [AOR= 1.932, 95% CI (1.649 to 2.264)] are more likely to get marriage before 18 years compared to the women in Dhaka division. However, among the women in Chittagong division [AOR= 0.930, 95% CI (0.813 to 1.063)] and Sylhet division [AOR= 0.385, 95% CI (0.335 to 0.443)] are less likely to get married before age 18 years. Although in the unadjusted odds ratio,   exposure to media, husband occupation(professional, agriculture) and wealth index had a significant association with early marriage but after controlling all other variables in this study, I did not found any significant association of these variables on early marriage.

Table 3: Unadjusted (Model-I) and adjusted (Model-II) odds ratios of associated factors for early marriage obtained from logistic regression models.

Covariates	Model-I (95%CI)	Model-II(95% CI)
Education Level (ref: no education)		
Primary	0 .694***	0.747***
	[0.611,0.788]	[0.650,0.859]
Secondary	0 .466***	0.560***
	[0.413,0.526]	[0.481,0.651]
Higher	0 .067***	0 .088***
	[0.059,0.077]	[0.073,0.107]
Working Status (ref: not working)		
Currently working	1.779***	1.196***
	[1.662,1.904]	[1.101,1.298]
Religion (ref: others)		
Islam	2.339***	2.308***
	[2.115,2.586]	[2.054,2.595]
Residence (ref: rural)		
Urban	0 .594***	0 .880**
	[0.555,0.636]	[0.804,0.962]
		Continue…………..

Division(ref: Dhaka)

Barisal	1.497***	1.564***
	[1.306, 1.716]	[1.333, 1.834]
Chittagong	0.987	0.930
	[0.876, 1.112]	[0.813, 1.063]
Khulna	1.615***	1.806***
	[1.419, 1.837]	[1.556, 2.097]
Mymensing	1.490***	1.303**
	[1.301, 1.706]	[1.114, 1.524]
Rajshahi	1.972***	1.835***
	[1.723, 2.257]	[1.573, 2.142]
Rangpur	1.773***	1.932***
	[1.551, 2.026]	[1.649, 2.264]
Sylhet	0 .501***	0 .385***
	[0.443,0 .566]	[.335,0 .443]

Husband education(ref: no education)

Primary	0.692***	0.850**
	[0.620, 0 .773]	[0.753, 1.026]
Secondary	0.437***	0.736***
	[0.392,0 .486]	[0.646, 0.839]
Higher	0 .144***	0.573***
	[0.128, 0 .0151]	[0.485, 0.676]

Husband occupation (ref : unemployed)

Professional	0.286***	1.081
	[0.227 , 0.362]	[0.479, 2.438]
Agriculture	1.687***	1.312
	[1.347, 2.114]	[.586, 2.937]
Skilled/semiskilled	1.009	1.192
	[0.810, 1.258]	[0.534, 2.663]
Small business	0.942	1.246 continue…..

	[0.756. 1.174]	[0.588, 2.784]
Wealth index (ref: poorest)		
Poorer	0.799***	1.081
	[0.705, 0 .905]	[0.479, 2.438]
Middle	0.744***	1.312
	[0.684, 0.876]	[0.586, 2.937]
Rich	0.507***	1.192
	[0.451, 0.570]	[0.534, 2.397]
Richest	0.256***	1.246
	[0.229, 0 .286]	[0.558, 2.748]
Media exposure (ref: not at all)		
Once a week	0.517***	1.253
	[0.383, 0.698]	[0.884,1.776]
At least once a week	0.588***	1.023
	[0.546, 0.633]	0.588,2.784

***p<0.001

**P<0.05

ref : reference category

CI = confidence interval.

6. Discussion:

The purpose of this study was to determine the prevalence of early marriage and measure the risk factors related with early marriage among women aged 20–49 years living in Bangladesh

using latest bdhs dataset. My study explored that respondents education, place of residence, working status, religion, divisions and husband's education were the factors that highly significant for early marriage. This is similler according to the existing literatures, early marriage were found to be significantly linked with a number of socio-economic factors, including education, religion, area of residence (urban/rural), husand's education, and divisions [26,27,28,29]. The relation between education and early marriage is evident from almost all demographic study. Several studies [30,31,32] claimed that illiteracy is the prime cause in explaining the high frequency of early marriage in Bangladesh. A research in women of Nepal has shown that every additional level of education beyond primary schooling substantially minimize the likelihood of early marriage [33].The current study is almost similar to that study. This study explored that primary(25.3%), secondary (44%)and higher(91.2%) educated women are less likely have early marriage respectively , compared to the women have no education. Usually, women with a higher level of education expend a longest life span in education, have a higher occupational inspiration and want to have a classy job. All these attainments delay the marital age [34]. Others Study found that there are many advantages of girls' education, including increased self competency and life skills, the opportunity for economic development, and self-empowerment. Low educational attainment is consistently associated with functional restriction [35–37]. It is also notable to mention that women with a higher level of education get consideration in taking decision on family affairs. Thus, they have better dealing power in getting late marriage and choose their groom. Husband's education is also influencing age at marriage. Results of my study found that partner's education is an important predictor of early marriage for the women in Bangladesh, that is women with partners having primary , secondary and higher levels of education were 15% , 26.4% and 42.7% less likely to get married at childhood (<18) which similar to other existing studies [38 ,39] . Women who marry to the men with a higher level of education are higher likely to delayed marriage. With education comes increased awareness on the adverse impacts of early marriage and early childbearing, more importantly educated men are likely to be abide by child marriage law. Awareness from the partner is particularly crucial for the patriarchal society of Bangladesh, as a stronger attitude from men could go a long way to curb the extensive girl-child marriage and adolescent motherhood in Bangladesh [27]. My study therefore, confirms the requirement of perception-raising programs through the education of both boys and girls. Though higher education of both females and males point out to play a protective role in early marriage, it is not the higher education itself, but the situation and other external elements displayed through education that decrease the of

probability of early marriage. My study also revealed that place of residence also a significant predictors of early marriage. Study found women in urban area were less likely to be involved in early marriage compared to their rural women. Earlier studies conducted in Bangladesh [40] . As well as other Asian country also found the same outcome [41, 42] . The data found urban-rural residential variation in the present study, as urban residents were 12% less likely than residents of rural areas to get marry before 18 years. Education facilities are always better in urban areas in Bangladesh and elsewhere. A study of BBS established that about 51.81% women aged five years or more were educated in rural area instead of 65.83% women in urban area [43]. Place of residence also participates in explaining the socialization system. It shows that people in rural areas are insignificant in terms of their educational attainment, economic position, social and cultural provision. Similar with earlier studies on Bangladeshi women and women in other developing countries, this study explored that women in rural areas are prone to reflect the more common behavior of early marriage [34, 44-47] . The women of rural areas of Bangladesh are less invested by the family than boys due to the social agreement that women will be married off early and impossible to contribute to the financial support of the family. Due to the annoying existence of a dowry, which is lower for younger girls during marriage, rural family choose early marriage of the women at younger age [38]. Proper intervention programs need to aim long-standing usual cultural norm baring freedom of women in the rural areas of Bangladesh. My study has revealed, religion as an significant determinant factor of early marriage. Muslim women were more likely having higher rate of early marriage compared to the non-Muslim women. Around 90% of the total inhabitants in Bangladesh is Muslim.[48] therefore, it is evident that Muslim morals and ethics hold the prime share in mainstream Bangladeshi culture. A study found that religion of Islam has more tendency to early marry.[49] **.** The higher frequency of early marriage along with Muslims reflects their customary beliefs and practices. Consistent studies conducted in Bangladesh or somewhere else [46, 50, 51, 52] also noticed that Muslim women marry before 18 years than their non-Muslim counterparts. Lack of proper literature in this point of view limits my prospect to justify my findings. But one meta-analysis also establish same result after reviewing the paper available between 1980 and 1990 [53] . Earlier studies reported Muslim parents are also more prone to marry their daughter earlier compared to the others religious groups due to the lack of social safety and religious limitation[53, 54]. Academic Islamic leader emphasizing the terrible effects of early marriage should accurately encourage women through religious conferences to modify their perceptions on marriage.

The result of this study had shown an positive association between working status and early marriage that the working women were more likely to get married at earlier age than the women who were not engaged in work. This may be explained the fact that there are very few proportion of women in Bangladesh engaged in professions. Most rural women engaged in agriculture as family or un paid workers[55]. Semi-skilled workers work for very low wages in places like garments sectors or NGO which do not extensively influence the delay of marriage [45] .That could be otherwise that economically disadvantaged families marry working girls , so that after marriage working girls can help their husband financially. This is partially consistent with previously conducted research of women in Bangladesh and Nepal [56, 57] that working women specially unskilled and semiskilled women are more likely to getting married at earlier age. Bangladesh has eight administrative divisions with remarkable cultural differences. Major variation is in the socio-economic condition detect in these divisions might have impact on the timing of marriage. In this study, I found women in Barisal, Rajshahi, Khulna, Mymanshing and Rangpur divisions were more likely to get marriage at younger age than Dhaka division. On the other hand, exception is observed in case of Sylhet division where women were less likely to get marriage at younger age compared to Dhaka. Multiple factors contribute such divisional inconsistency having cultural belief and traditional norms as mainly considerable [58] . Particularly, traditional norms of Bangladeshi residents that notably varied by region based on regional overall education status are another factors that encourage early marriage in some region [59] . Another possible causes of early marriage may be depend on regional poverty which is frequent in northern region (Rangpur division) in Bangladesh on which early marriage rate are also higher . In Rangpur division 30.5% people reside in lower poverty line and 47.2% reside in upper poverty line [24]. Government scheme reduce divisional variation and occupational opportunity especially for the women who leads to the removal of poverty which may be helpful to decrease such higher rate of early marriage and geographical disparities [43]. Women from Sylhet division are more obedient to follow the marriage law in Bangladesh. One probable reason is that there are various tribal communities in Sylhet divisions and the mean age at marriage of tribal women is four years high than other Bangladeshis [60]. In addition for enhanced earnings, many young people from Sylhet move to the Europe, especially in the UK and Middle East [61], which persuaded them to get marry late.

Though my study didn't find any association of poverty with early marriage but many study has revealed that the poor people were more likely to get their children married at their early ages [16, 22, 34] . The new "special provision" which included in the article under the child marriage act 2017 ,that will encourage to increase early marriage in Bangladesh because there is no explanation for identifying those who will be incorporated under the special provision. A study conducted in Bangladesh has revealed that poor people will habitually take such chance in the name of poverty [62]. Bangladesh has made significant progress in achieving the Millenium Development Goals (MDGs) in reducing MMR between 1990-2015.Now Bangladesh aims to achieve the Sustainable Development goals (SDGs) by 2030. And that only possible when we can prevent early marriage by taking necessary action, Development made by Bangladesh regarding early marriage , especially those factors that are connected to early marriage has quite slow. Thus, this study is making a humble attempt to explore factors that are statistically linked with early marriage with recent data of BDHS2017-2018. So that it can have a clear   picture of the current position among women in Bangladesh and can take better interference.

7. Strength and limitation

This study has several strengths and limitation. The key strength of this study is nationally available wide survey dataset and this study used the various advanced as well as appropriate statistical analyses which produced the better findings, therefore, it is guessed that the findings are more exact. My study is not beyond limitation. The data collected by BDHS about the marriage age has been taken verbally from the respondent , not based on any documents . This variety of data gathering occasionally creates recall bias. Due to corona pandemic we could not collect primary data. If we could do this analysis with primary data , we would be able to get a better idea about of the current state of early marriage.

8. Conclusion and recommendations

My study demonstrates that the respondents and partner education , division , place of residence, religion and working status of respondents as determinant factors of early marriage. The policymakers and social workers can operate the findings of this study to draw some intervention program to prevent the young women from the adverse effect of early marriage. Therefore, based on the findings, some suggestions are stated below to prevent the harmful impact of early marriage:

1. As explained earlier, the concerned authority should strictly implement the marriage act to increase the level of age at first marriage specially in the rural area . "Special Provision" according to the article 19 under Child Marriage Restraint Act 2017 , have to be clearly defined otherwise evil populace will consistently take such opportunity to getting their children married off at early ages.

2. It is necessary to educate both male and female counterpart of this country up to high level, which will ultimately increase the age at first marriage. For stopping early marriage the current importance on education for women (keep girls in school) should be sustained . It is important to mention here that there are already have different government projects to encourage the education of children in Bangladesh. Among them , education at no cost for girls up to class ten and allowances for female learner are two important projects that should be persist until confirming that no girl in Bangladesh will be married before achieving at least higher secondary level , resulting in getting debased early marriage.

3. Need to increase social security of women specially in rural area.

4. Parents awareness should build up about intense health hazard on early marriage,

5. Since our country is one of the largest Muslim countries in the world, early marriage is widely practiced in Bangladesh. Therefore, policymakers can take the initiative to organize seminars to give explanation the awful outcome of early marriage in a religious way.

6. Need more qualitative research on working women for exploration of their early marriage.

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10. Annexure

SPSS Script

early marriage spss (1).sav