Teenage marital pregnancy and its risk factors in a rural community of Bangladesh

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Abstract

Background: Teenage pregnancy is a major health concern both in Bangladesh and developed countries. The important risk factors identified for teenage pregnancy in South Asian countries including Bangladesh are teenage marriage, low socio- economic status, low educational attainment, disrupted family structure and birth intention. **Objective:** To find out the proportion of teenage marital pregnancy and its risk factors in rural community of Bangladesh. **Methods:** It was cross sectional descriptive type of study conducted among the married women aged <30 years in a rural community Bangladesh. A total of 419 women were included in this study. Data were collected by 4th year medical students of Barind Medical College with the help of a pretested semi structured interview schedule by face to face interview. Chi-square test was used to find out the association between variables and teenage pregnancy. Multiple logistic regression analysis was also applied to identify the important risk factors of teenage pregnancy. **Results:** A total of 419 women, 215 (51.3%) women experienced teenage marital pregnancy. The mean age of first pregnancy was 18.6 (SD = 2.4) years. More than 53.0% of the women were married before completion of 18 years and their mean age of first marriage was 16.4 years. Marriage before 18 years (OR 24.21, 95% CI 13.48 to 45.57), Low education (OR 2.97, 95% CI 1.23 to 7.14) and unplanned child birth (OR 5.86, 95% CI 2.75 to 12.50) of the women were identified as risk factors of teenage age pregnancy in the rural area. **Conclusion:** The ordinance of legal age at marriage (18 years) should be properly implemented in Bangladesh specially in rural areas. Policy and special programmatic measures should be undertaken to remain girls in school for a longer duration to prevent dropouts giving emphasis on the education for treating the effect social and cultural norms favouring girls to get marry earlier and to have early childbirth. User- friendly reproductive health services as well as accurate information on reproductive health should be availed to the young women to avoid unwanted and mistimed births.

Key words: teenage pregnancy, risk factors, rural community, Bangladesh

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Introduction

Teenage pregnancy is a major health concern both in developed and developing countries.[1-3] Around the world, fifteen million women less than 20 years of age bear child which is one-fifth of all births.[4] Evidence in developing world indicates that one-third to one-half of women become mothers within 19 years of age[5,6] The situation in South Asian countries is severe as there are higher proportions of teenage pregnancies in this region due to common practice of early marriage and socio-expectation to have a child soon after marriage.[7-9] Half of all world adolescent births occur in just seven countries:

Bangladesh, India, Brazil, the Democratic Republic of the Congo, Ethiopia and the United States.[10] Bangladesh has the highest adolescent fertility rate in South Asia where 1 girl in 10 has a child before the age of 15 yrs. whereas 1 in 3 teenager becomes mother or pregnant by the age of 19 yrs.[11-13]

There are ample evidences suggesting that adolescent motherhood takes a toll on a girl's health, education and rights, which prevents her from realizing her own potential and has adverse impacts on the baby. Adolescent childbearing is generally associated with higher risk of adverse health outcomes of mother and newborns including spontaneous abortion, preterm delivery and low birth weight even death among adolescent girls as compared to older women aged >19 yrs.[14] In addition to the adverse health outcomes, pregnancy can induce tremendous psychological stress on the adolescents. Due to negative medical, psychological and social outcome, it is pertinent to launch interventions to avoid teenage pregnancies. Identification of the risk factors that influence the occurrence of teenage pregnancies is the basis on which effective preventive programmes should be developed.[15]

Risk factors of teenage pregnancy are enormous and may vary population to population. Teenage pregnancy in developed countries usually occurs outside marriage, but in developing countries, it is often within marriage.[16] Disrupted family structure and limited education, risky sexual behaviour such as early sexual initiation increasing number of partners and nonuse of contraceptives were the important factors associated with teenage pregnancies in USA and European Union Countries. The important risk factors identified for teenage pregnancy in South Asian countries include teenage marriage, low socio- economic status, low educational attainment, disrupted family structure and birth intention. [16,17]

A lot of studies conducted in Bangladesh so far on fertility related issues greatly focused on the relationship between age at first marriage, unwanted pregnancies, contraceptives use, etc. and socio-demographic factors[9,13,18] Little attention has been paid to understand the risk factors of adolescent pregnancy specially in rural communities of Bangladesh.[19-21] Under these circumstances this study attempts to identify the risk factors of adolescent pregnancy and also aims to investigate to what extent the factors influence adolescent motherhood in a rural community of Bangladesh.

Methods

It was a cross sectional type of descriptive study with the objective to find out the proportion of the married rural women aged <30 years became pregnant within 19 years and the key risk factors of the teenage marital pregnancy in a rural community of Bangladesh. All married women aged <30 years residing in the rural community constituted the study population. A total of 419 women were selected purposively as sample unit in this study. Data were collected by 4th year medical students of Barind Medical College with the help of a

pretested semi structured interview schedule. The interview schedule was designed to record the socio-demographic characteristics, age of first marriage and pregnancy, and complications related to this pregnancy. Obtaining informed consent of the selected women and maintaining all confidentiality and privacy, survey method was applied to collect information from them by face to face interview. Data were entered in the computer and processed using SPSS for windows. Descriptive analytical techniques involving frequency distribution, computation of percentage, mean, SD etc. were applied. However, association between variables were conducted applying Chi-square. Multiple logistic regression analysis was used to identify the important risk factors of teenage pregnancy.

Results

A total of 419 women, 215 (51.3%) were experienced first marital pregnancy within 19 years. The mean age of first pregnancy was 18.6 (SD = 2.4) years.

Of the total 419 respondents, 224 (53.5%) were married before completion of 18 years and the rest 195 (46.5%) respondents were married at 18 year or above. The mean age of first marriage was 16.4 years. Eighty three percent of the married women before 18 years experienced first marital pregnancy within 19 years but it was only 14.9% among the women who married at 18 year or above. Higher educated participants had significantly (p=0.000) lower teenage marital pregnancy compared to their less educated counterparts. Participants with educated husband also were significantly (p=0.000) less likely to experience teenage marital pregnancy. Middle class Women (with monthly family income Tk.10001–30000) had experienced teenage marital pregnancy in lowest proportion comparison to other economic groups. Richest women had higest proportion of teenage pregnancy. Participants' teenage pregnancy significantly (p=0.018) associated with their economical status. Women desired for more than two children were experienced significantly more teenage marital pregnancy compared to the participants desired for ≤2 children (63.7% vs 46.1%). Participants exposed to one mass media had significantly (p=0.002) lesser experience teenage marital pregnancy than those exposed to more than one mass media. Similarly, participants whose pregnancies were planned were significantly (p=0.000) less likely to experience teenage marital pregnancy. This analysis also revealed that occupation (house wife and working mother) and family type (nuclear family and joint or extended family) were not associated with teenage pregnancy (Table 1).

Multivariate logistic regression analysis was performed to identify the risk factors of teenage marital pregnancy. Marriage before 18 years of the rural women was identified as the most important risk of teenage pregnancy. Participants who married before 18 years had 24 times more risk to experience teenage marital pregnancy compared to the participants married at 18 years or above. Low education (OR 2.97,

95% CI 1.23 to 7.14) and unplanned child factors of teenage age pregnancy in the rural
birth (OR 5.86, 95% CI 2.75 to 12.50) of area (Table 2).
the women were also identified as risk

Table 1: Teenage marital pregnancy and its associated factors: a bi-variate analysis n = 419

Factors	Age of marital pregnancy		Test Statics	P value
	Within 19 years N (%)	After 19 years N (%)		
Age of marriage				
Before 18 years (n = 224)	186 (83.0)	38 (17.0))	193.9	0.000
At 18 years or above (n = 195)	29 (14.9)	166 (85.1)		
Maternal education				
Up to secondary (n = 335)	200 (59.7)	135 (40.3)	47.07	0.000
Higher secondary or above(n = 84)	15 (17.9)	69 (82.1)		
Husband education				
Up to secondary (n = 308)	182 (59.1)	126 (40.9)	47.07	0.000
Higher secondary or above(n = 111)	33 (29.7)	78 (70.3)		
Family income				
≤Tk. 10000 (n = 270)	150 (55.6)	120 (44.4)	8.02	.0.018
Tk.10001 – 30000 (n = 133)	55 (41.4)	78 (58.6)		
>Tk.30000.00 (n=16)	10 (62.5)	6 (37.5)		
Occupation				
House wife (n = 392)	205 (52.3)	187 (47.7)	2.35	0.125
Working mother (n=27)	10 (37.00	17 (63.0)		
Family type				1.000
Nuclear family (n=257)	132 (51.4)	125 (48.6)	.001	
Joint or extended family (n=162)	83 (51.2)	79 (48.8)		
Desire number of children				
Up to 2 (n=295)	136 (46.1)	159 (53.9)	10.83	0.001
More than 2 (n=124)	79 (63.7)	45 (36.3)		
Mass media exposure				
Exposure to one media (n=224)	131 (58.5)	93 (41.5)	9.90	.002
Exposure to > one media (n=195)	84 (43.1)	111(56.9)		
Birth intention				
Intended (n=327)	147 (45.0)	180 (55.0)	24.102	0.000
Unintended (n=92)	68 (73.9)	24 (26.1)		

Table 2: Teenage marital pregnancy and its associated factors: a bi-variate analysis n = 419

Variables	Odds ratio	95% CI	p-value
Age of marriage			0.000
Before 18 years	24.21	13.48 – 45.57	
At 18 years or above	1.00	Reference	
Maternal education			0.015
Up to secondary	2.97	1.23 – 7.14	
Higher secondary or above	1.00	Reference	
Husband education			0.708
Up to secondary	1.15	0.53 – 2.51	
Higher secondary or above	1.00	Reference	
Family income			0.499
≤Tk. 10000	1.00	Reference	
Tk.10001 – 30000	0.81	0.43 – 1.53	
>Tk. 30000	2.08	0.39 – 10.86	
Desire number of children			0.961
Up to 2	1.00	Reference	
More7 than 2	1.01	0.55 – 1.87	
Mass media exposure			0.189
Exposure to one media	1.47	0.82 – 2.62	
Exposure to > one media	1.00	Reference	
Birth intention			0.000
Intended	1.00	Reference	
Unintended	5.86	2.75 – 12.50	

Discussion

Despite substantial advancement in human development in the recent decades, the early marriage and early childbearing is still persistent as a major social problem in Bangladesh. Studies reveal that the females' age at first marriage in Bangladesh is still one of the lowest in the world. Traditionally, Bangladesh has one of the highest rates of child marriage worldwide. Although the legal age of marriage in Bangladesh for girls is 18 years, about 66% of the women get married before that age.[22] The median/mean ages at first marriage of Bangladeshi women were reported to be 14.1 years in 1996, 15.2 years in 2007.[23,24] According to the analysis of the data from the Bangladesh Demographic and Health Surveys starting from 1993 to 2014, the mean age at first marriage was 15.0 years.[21] In this study it was 16.4 (SD=2.92) years. The present study findings suggest that

there has been limited and patchy progress in prevention of child marriage in Bangladesh in last two decades.

This study found that more than 50% of the participants had experienced teenage marital pregnancy, which was closed to the other study findings conducted in last decade in rural and urban areas of Bangladesh, where mean age at first birth was below 18years.[24-26] The study also did not find any remarkable trend of decreasing of adolescent childbearing in Bangladesh. It is consistent with the findings of Islam *et al.*[21]

Multivariate analysis of the data in this present study suggest that early marriage (<18 years) is the most important risk factor of the teenage pregnancy. Early marriage is the patriarchal Bangladeshi culture and due to this they are at risk to pregnant at this time. Teenage pregnancy in developed countries usually occurs outside marriage, so early marraige was not identified as an risk factor of the teenage pregnancy in this society. But in developing countries, like Bangladesh teenage pregnancy is often within marriage. The present study reveals that more than 68% teenage pregnancy may be reduced by prevention of marriage before 18 years, which is illegal but a tradition deeply embedded in Bangladeshi society. Not only Bangladesh, other South Asian countries like India, Pakistan, Nepal, Maldives, Bhutan have high proportions of teenage pregnancies, since early marriage is common and there is a social expectation to have a child soon after about within one year of marriage.[7,9] Since in Bangladesh, where child births are confined to marriage, age at first marriage marks the onset of the period of offspring procreation, and therefore, first marriage before 18 years is considered the prime determinant of teenage pregnancy.

A relatively lower attainment of educational status which was found to be a risk factor for teenage pregnancy in the present study is well documented as a risk factor for teenage pregnancy in different countries.[9,16,17] Widely eccepted hypothesis for the above observation is, women's higher secondary or above education acts as catalyst toward delayed childbearing. Because the women have postponed substantial times during their schooling for education and married at later ages compared to their lesser educated counterparts. As well as higher education empowered and at the same time aware the women more than the lesser educated women. As a result the autonomy towards making decisions of their own health care is increased significantly more than the lesser educated women.[24] On this assumption, Female Stipend Programme (FSP) was implemented in 1982 in Bangladesh to help increase the enrolment and retention of girls in secondary schools, delay their marriage and motherhood, and increase girls' income-earning potential that empowered them.[27] Secondary school enrolments for girls jumped from 39% in 1998 to 67% in 2017 in Bangladesh , but dropout rates for girls were at a high 42% percent.[28] Despite of wide expansion of FSP in Bangladesh, early marriage and early childbearing have not been substantially decreased over the decades.[24] The findings of the present study also consistence with this. The above fact suggests that FSP effectively increased the enrolment. But failed to retain the girls at

secondary school level, which is the main contributor of teenage marriage.

Most of the teenage pregnancy in the western countries particularly USA are unintended, only 6 to 10% of the teenage pregnant mothers are intended to become pregnant.[29] Abortion is used by 4 out of 10 pregnant adolescents (44%) to terminate unwanted pregnancy in USA. In the United Kingdom, Teenage Pregnancy Strategy Evaluation estimated that up to 90% of teenage pregnancies had been unplanned.[30] But in developing countries like Bangladesh it is just opposite.[24] In this study more than 68% of the teenage pregnancies in the rural community were planned or intended. It is consistent with the findings of Kamal SMM.[24] It indicates that adolescent childbearing and adolescent motherhood are highly valued in Bangladesh. In this study, the women who have not a definite intention/plan of pregnancy or child birth, have 5 times more risk to become pregnant in teenage than those have. It suggests that the married teenagers, who had no intention/plan for pregnancy, were either reluctant about the use of contraceptives or facing an unmet need for family planning services in the study area.

Consistent with other studies,[1,20] this study identified that women's husband education had a negative association with teenage marital pregnancy only in bi-variate analysis, but no influence in multi-variate analysis indicates the importance of other factors and incapacity of husband education to influence adolescent pregnancy in multidimensional settings. Similarly, monthly family income, desire number of children and mass media exposure appeared to have significant association with teenage marital pregnancy only in the bvariate analysis likely for the same reason.

The study has several limitations. First, study area and sample size were preselected for the convenience of the data collections. So the findings can't be generalized due to selection bias.

Second, the survey included a wide range of retrospective questions, so it suffers from recall bias. Third, the rural women underreported their age than their actual age. It is a common phenomenon of developing countries where vital registration system is not strictly followed. Such underreporting may bias the estimates. Considering the above limitations, caution is warranted when interpreting the results.

The results of this study have certain implication in preventive measures to get rid of teenage pregnancy from Bangladesh. Immediate policy and special programmatic measures should be undertaken to prevent the child marriage *i.e.* marriage before 18 years. Adolescents and their guardians should be made more aware of the adverse health outcomes, social and economic consequences of early marriage and early childbearing. The ordinance of legal age at marriage (18 years) should be properly implemented in Bangladesh specially in rural areas. Policy makers and planers should be rethinking about the FSP. Special measures should be undertaken to remain girls in school for a longer duration to prevent dropouts. In addition, giving emphasis on the education for treating the effect social and cultural norms, which are still favouring girls to get marry earlier and to have early childbirth. User friendly

reproductive health services as well as accurate information on reproductive health should be availed to the young women to avoid unwanted and mistimed births. Social movement and social campaigns should be taken to reduce adolescent motherhood highlighting the adverse outcomes of early marriage, long run health consequences of mothers and child.

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