Adolescent Pregnancy Complication and Wastage in Bangladesh

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Abstract

Introduction: Pregnancy among adolescents is a health risk for the individual as well as the fetus. The main aim of this study is to examine the pregnancy complications and its outcome among adolescent women in Northern region (Rajshahi) of Bangladesh. **Methods:** The analysis is based on a part of faculty research; University of Rajshahi funded study on adolescent motherhood and pregnancy complications in the region, which involved a micro level survey of 400 adolescent conception aged 10-19 and in-depth interviews with 37 adolescents who had experienced pregnancy wastage. The indicator of poor pregnancy outcomes analysed includes pregnancy or delivery complications and pregnancy wastage. **Results:** A striking finding is the higher proportions suffer pregnancy problems, especially in cases of early conception. In particular, younger adolescent aged under 20 years has been observed to have the highest proportions of delivery complications and pregnancy wastage due to insufficient intake foods and possible biological immaturity. **Conclusion:** Early teenage pregnancy and its effects pose very severe different pregnancy and delivery complications consequently wastage.

Keywords: Adolescent, Pregnancy, Wastage, Odds ratio

Introduction

Around the world, people celebrate the birth of a new baby. Societies expect women to bear children, and honor women for their role as mothers. Not withstanding the unresolved debate on the role of biological immaturity as opposed to social disadvantage in explaining poor birth outcomes among adolescents, studies in various settings of the world have established a positive association teenage pregnancy and poor pregnancy outcomes such as delivery complications, low birth weight, premature births, and pregnancy wastage[1,2].

In developing countries, the problem of poor pregnancy outcomes among teenagers is further exacerbated by poor maternal health care among teenage mothers[3]. In recent decades adolescent pregnancy has become an important health issue is a great number of countries including Bangladesh, both developed and developing[4,5,6]. This problem is particularly critical in south Asian and Sub-Saharan African where the incidence of adolescent pregnancies is the highest, mainly due to lack of effect contraception for adolescent. So, this was considered to be a big crisis in developing countries[7,8].

Every year, more than 200 million women become pregnant, and at least 15% are likely to develop complications that will require skilled obstetric care to prevent death or serious ill-health[9]. In less developed countries, more than half a million mothers die from complications related to pregnancy and childbirth each year. Adolescent pregnancy and childbearing are national problems that affect the community and society at large[10].

Early childbearing is fraught with substantial health risks for both the mother and the child. Young

mothers are more likely to experience pregnancy related complications and less able to deal with them, which often lead to maternal death[11]. Prenatal care can also help prevent, identify, and treat iron deficiency and anemia in adolescents. There is evidence linking severe anemia and maternal mortality[12]. In developing countries, most anemias are due to nutritional iron deficiency, although some other causes include malaria and parasitic infections. Adolescents are at increased risk of iron deficiency because they are still growing and at the onset of menstruation.

Bangladesh has one of the highest maternal mortality rates (MMR) in the world, i.e., 3/1000 live births[13]. This unacceptably high MMR directly contributes to the high perinatal (newborn) mortality rate in the country. The estimated lifetime risk of dying from pregnancy and childbirth related causes in Bangladesh are about 100 times higher than in the developed countries. The tragic consequence of these deaths is that about 75% of the babies born to these women also die within the first week of their lives. In this country, 14% of deaths of pregnant women are associated with injury and violence, which is on the rise[14].

Current Investigation

Prior research suggests that women's early pregnancy is associated with the higher risk of maternal and child mortality, and pregnancy complications in Bangladesh and others developing countries. Despite the high prevalence of teenage pregnancies in Bangladesh, and associated with adverse health and social consequences, studies addressing issues relating to maternal health among adolescents in the country are quite scarce.

Findings from prior research lead us to the following research question: Are adolescent's pregnancy and insufficient antenatal care creating pregnancy complications, or do they actually have traditional attitudes toward pregnancy wastage? This article aims to identify the possible health problems specific to pregnant adolescent and to investigate their effect on adolescent pregnancy wastage.

Data and Methods

The study was conducted in the faculty research run by the collaboration of Population Science and Human Resource Development department, University of Rajshahi, Bangladesh among the female adolescents aged 10-19 years who were living in Rajshahi city. The total period of study was one month (during September to October 2009). Total 400 adolescents were selected from three wards in Rajshahi city for interview during the study period. The respondents were asked weather they were having any problem related to reproductive complications, followed by direct questions on presence of itching, anemia, urinary problem, hepatitis-B, etc. or eclampsia, lengthy delivery, excess haemorrhage, delay in delivery of placenta, abortion or still birth. Information was also collected about different socio-demographic factors on redesigned and pretested proforma. Data thus collected were tabulated and analyzed by statistical software SPSS ver. 16.0. To find out the probable heath and demographic determinants of adolescent pregnancy wastage and possible correlates of pregnancy and delivery status of the adolescent mothers, multivariate statistical analyses have been carried out over this data. Since the selected dependant variables of the study are dichotomous in nature, logistic regression analyses have been used to estimate the relative risks out of the predictors.

Results

Socio-demographic profile of the study population

Socio-economic and demographic characteristics of the respondents are given in Table 1.

The median age of conception was 17 years whereas the age at marriage was 16 years. The pregnancy rate includes pregnancies ending in births and also pregnancies ending in wastage (abortion), the abortion or wastage rate are the number of abortions per 100 women of a specific age. The study shows the pregnancy wastage rate was 10.28 per 100 adolescent women aged 10-19 years. Over one third of the women had no education and just one-thirds had primary education or had attended primary school and a mere (5%) had completed higher education. Only 16 percent of the adolescent's husband had higher education, compared with 29 percent of those with no education. Most of the adolescent were engaged in household works and few were employed.

Complications of Adolescents Pregnancy

Adolescents are not fully physically developed: at menarche a young woman's pelvis has not finished growing. Therefore, pregnancy and birth at a young age pose serious risks for both mother and child. The bivariate associations between pregnancy and delivery characteristics of adolescent's with pregnancy conception are presented in Table 2.

Age at conception is significantly associated with pregnancy and delivery complications. Mothers who conceive baby before 20 years of age suffer more complications in pregnancy and delivery than women

who bear children at age 20 or later. Some complications of pregnancy may occur more frequently in adolescent than in older mother such as itching, anaemia, urinary problem, Hepatities-B and others are significantly associated with female age at first birth. The analysis results show that more than fifty percent adolescent suffer pregnancy complications whereas only eight percent female suffer those complications that experience conception at age 20 years and later. The maximum adolescents suffer anaemia complication during the time of pregnancy. About 98 percent adolescent suffer delivery complications like eclampsia, lengthy delivery, excess haemorrhage, and delay in delivery of placenta whereas only 16 percent suffer these complications that are pregnant at age 20 years and later. More than fifty percent adolescent undergo lengthy delivery and very few (2%) adolescent delivered babies safely.

Adolescent's Pregnancy wastage: Multivariate Analysis

The multivariate analysis shows that age at first conception, visit of health worker, pregnancy complication, and intake of nutritious food has significant effect on pregnancy wastage but TT injection had no significant effect.

Age at first conception had significant positive effect on abortion or stillbirth among adolescent. Adolescent who were pregnant under age 15 years are 39.68 times higher risk of abortion compared to the relative younger group (15 years and later). Visit of health worker had significant negative effect on pregnancy wastage. Adolescents who were visited by health worker regularly, were 83% less likely to pregnancy wastage than those not ever visited by health worker. The relative risk of pregnancy wastage were 83 percent lower among adolescent who did not have any pregnancy complication than those had pregnancy complications like anemia, itching and others. Adolescents who took nutritious food during pregnancy time had significant lower risk of pregnancy ended in abortion or stillbirth than who took nutritious food.

Table 1: Demographic profile of the adolescent women

Characteristics	Frequency (N=400)	Percentage (%)
Education of respondent at time of marriage		
No education	158	39.5
Primary	124	31.0
Secondary	98	24.5
Higher	20	5.0
Education of respondent during delivery		
No education	152	38.0
Primary	112	28.0
Secondary	87	21.8
Higher	49	12.2
Education of husband		
No education	116	29.0
Primary	97	42.2
Secondary	123	30.8
Higher	64	16.0
Occupation of respondent		
Employed	85	21.2
Home maker	315	78.8
Median age at marriage (years)	16.0	
Median age at conception (years)	17.0	
Median age during delivery (years)	17.0	
Pregnancy wastage rate per 100 adolescent	37/365*100=10.28	

Table 2: Bivariate associations between pregnancy characteristics with age at conception in Rajshahi city, Bangladesh 2009.

Reproductive Complications	Age at conception (years)		χ^2 Test
	10-19	20 and over	
Pregnancy complication			
Problem (Itching, Anemia, Urinary problem, Hepatitis-B, Others)	178 (52.8)	5 (8.2)	χ^2 =41.41 d.f=1 P=0.000
No problems	159 (47.2)	56 (91.8)	
Total	**337 (100)**	**61(100)**	
Delivery complication			
Safe delivery	7(2.1)	51 (83.6)	χ^2 =2.773E2 d.f=1 *p*=0.000
Suffer from eclampsia, lengthy delivery, excess haemorrhage, delay in delivary of placenta	332 (97.9)	10 (16.4)	
Total	**339 (100)**	**61 (100)**	

Table 3: Logistic regression model estimates the relative risk of adolescent pregnancy wastage by health related variables, Bangladesh, 2009.

Characteristics	Coefficient	*p*- value	Odds ratio	95% CI
Age at conception <15 years 15 years and over	 3.39 ...	 0.00 ...	 39.68 1.00	9.20-95.73
Visit of health worker Regular visits Not visits	 -1.80 ...	 0.00 ...	 0.17 1.00	0.05-0.54
Pregnancy complications No problems Problem (itching, Anemia, Hepatitis-B, others)	 -4.14 ...	 0.00 ...	 0.17 1.00	0.003-0.09
Food intake Nutritious Non nutritious	 -4.32 ...	 0.00 ...	 0.01 1.00	0.001-0.13
Received TT injection No Yes	 0.39 ...	 0.56 ...	 1.48 1.00	0.40-5.43
Constant	-1.66	0.01	0.19	

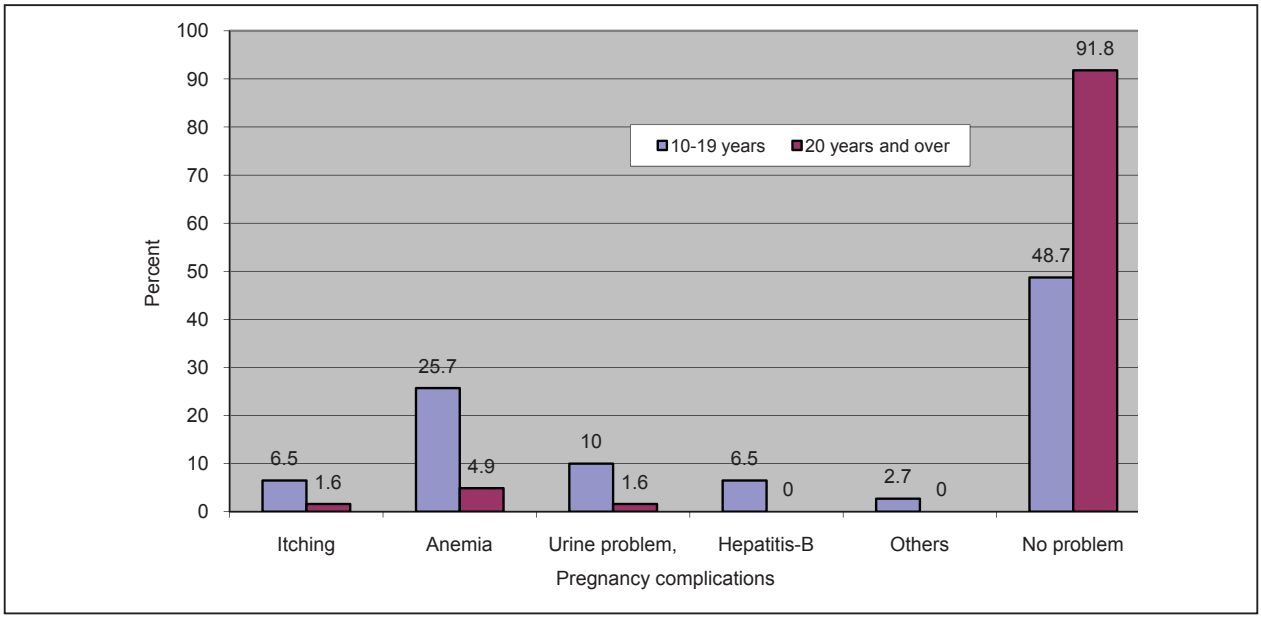

Fig 1: Showing complications in adolescents pregnancy in Rajshahi city, Bangladesh, 2009

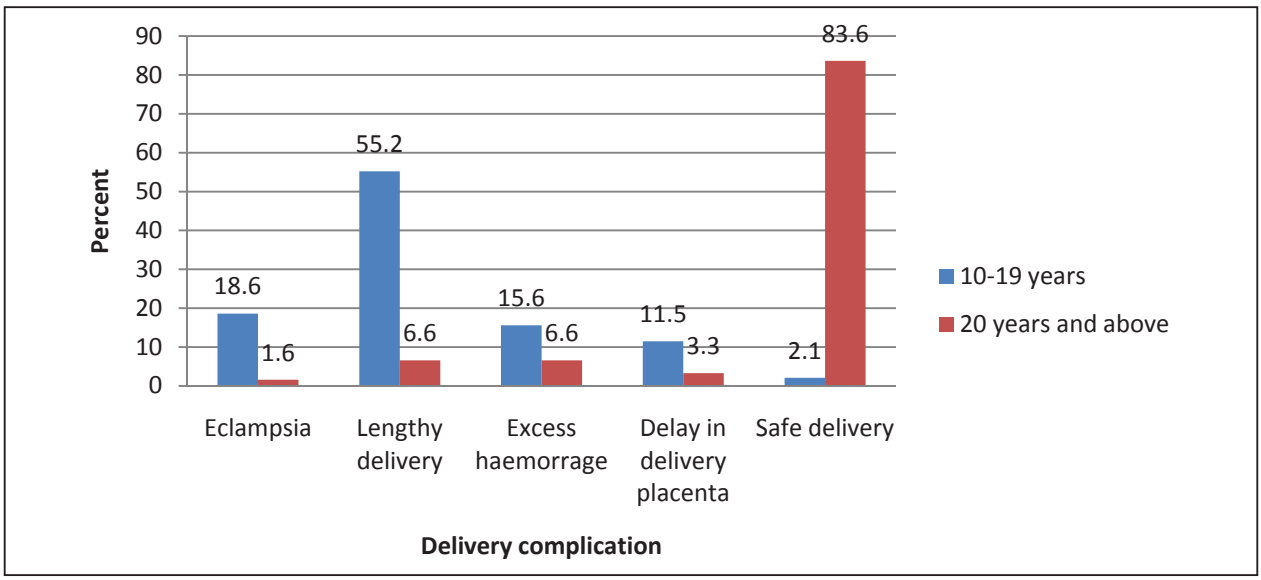

Fig 2: Showing delivery complications in adolescents in Rajshahi city of Bangladesh, 2009

Discussion

In the present study, the median at first marriage was found to be 16 years and median age at first conception among adolescent was 17 years. Almost all had attained primary level education and were no longer enrolled in school. A recent study in Rajshahi of Bangladesh reported that the average ages at marriage were found to be 15.18 years and one half (50%) of the total population give first birth before the age of 19 years[15]. A large portion of marriages still take place before the legal age; around 79% of Bangladeshi women get married before the age of 20 years[16]. Early marriage is a common phenomenon in Bangladesh with one-third of girls aged below 15 (33%) and nearly three-quarters aged below 18 years (74%) being married. Among the six administrative divisions of Bangladesh, Rajshahi has the highest early marriage rate (81%) compared to the lowest in Sylhet (58%) (BBS-UNICEF, 2007). Another study found that the mean age at first marriage was 16.57 years[17]. The observation regarding the fate of pregnancy outcomes of adolescent mothers presents quite a grave situation. It was found that more than 10.28 percent of all conceptions end with stillbirths or abortions.

Particularly striking is the strong association of age at conception with pregnancy complications and delivery status (p<0.001). Over fifty percent adolescent suffer different pregnancy complications and about ninety percent adolescent fell into delivery troubles. Deaths from anaemia, eclampsia and obstructed labour are more common in adolescent mothers. If the mother is small as well as young, she is likely to give birth to a small, weak baby whose chances of survival are equally small. Several studies observed the pregnancy complications like hypertension, eclampsia, iron deficiency, were more common among adolescent[18,19,20,21,22]. The first pregnancy for thirty five of the interviewees had ended in abortion or stillbirth. Near about one tenth (9.6%) of the pregnant adolescents was wastage babies either induced abortion or naturally. A study found that overall, 7.5 of all the reported pregnancies ended up in abortion or still birth, while the remaining 92 percent ended in live birth either prematurely or full term[23]. Pregnant adolescents are more likely to experience spontaneous abortion or to seek unsafe induced abortion than adult women[24]. Moreover, since adolescents are more likely to delay seeking an abortion, they experience more abortion-related complications.

The results of multivariate analysis confirm the strong link between age at conception and adolescent pregnancy wastage, with age at first conception before 15 years being more likely to end in abortion or stillbirth, compared to those that conceived at 15 years and over. Adolescent pregnancy and childbirth impose difficult long-term outcomes and have adverse effects not only on the young mother, but also on her child[25, 26]. These negative consequences and outcomes have been documented over the years, and society tends to be stereotype in all adolescent mothers in an unfavorable manner[27].

Another factors significantly associated with pregnancy wastage are visit of health worker, pregnancy complications and intake nutritious foods. The risk of pregnancy wastage is significantly lower among adolescent who are visited by health worker regularly than non-visiting counterparts. A study in neighboring

country like India found that younger adolescent mothers were less likely than older adolescent and adult mothers to have had the recommended number of antenatal check-ups had a delivery in a health facility or received a postpartum check-up[28]. Infact, health workers make much aware adolescent mother about their health complications and suggest all kinds of vitamins and vaccine needed for them. Pregnancies complications are significantly more likely to result in an abortion or stillbirth than those with no pregnancy problems. A recent study focused that, younger adolescent mothers; those aged below 17, were significantly more likely to experience pregnancy-related complications than were adult mothers, with older adolescent mothers (those aged 17–19) sometimes following the pattern of their adolescent counterparts and sometimes that of adult women[28,29]. Intake of nutritious food during pregnancy period also shows strong significance, the association is in the reverse direction, with intake nutritious foods in pregnancy time being less likely to result in wastage.

Similar observations had been made in an earlier study based on a different data set which noted that mothers were less likely to report wastage if they take antenatal care during pregnancy time[16]. In some places, rural Bangladesh for example, women who are pregnant for the first time may be constrained in making decisions about their use of medical care, as mother-in-laws often expect adolescents to give birth at home with traditional birth attendants, and the young women have little or no influence on the decision[30].

Conclusion and Policy Implications

In recent decades adolescent pregnancy has become an important health issue in a great number of countries. It is one of the major public health problems in Bangladesh. The incidence of adolescent pregnancy complications and abortion is increasingly year-by-year. Adolescent pregnancy is not only affect individual health but also public health and society as a whole. There are many consequences adolescent health after their pregnancies. The study divulges many consequences following their pregnant such as lack of antenatal care, occult anemia, Hepatitis-B, urine problem, length delivery, haemorrhage, and delay in delivary of placenta, pregnancy wastage and others. The multivariate analysis revealed early conception, not visited by the health worker; pregnancy complications and insufficient nutritious food have played a significant role on pregnancy wastage among adolescent women. Appropriate health service and sexual counseling for adolescents as well as family planning should be provided to prevent adolescent pregnancy.

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