

Adolescent Pregnancy Outcome in a District Hospital of Bangladesh

Chowdhury N¹, Rahim R², Khan LN³, Sweety K⁴, Akther P⁵

ABSTRACT

Background: Adolescent pregnancy is universally accepted as high risk pregnancy. Bangladesh has the highest (1 in 10) adolescent fertility rate in South Asia.

Objective: The study was conducted to find out the common problems of adolescent pregnancy.

Methodology: A comparative cross-sectional study was carried out among 100 respondents (50 adolescents and 50 adults) in Munshigonj General Hospital from 1st January to 31st December 2018. Respondents were admitted patients who have delivered either vaginally or by caesarian section. Women aged 15 to 19 years selected as adolescent and those aged 20 to 40 years selected as adult. Socio-demographic characteristics, past obstetric history, antenatal checkup, antenatal and intrapartum complications, and clinical state on admission were recorded in a semi structured questionnaire. Obstetrical parameters of adolescent and adult groups were compared.

Results: Among total admitted patients 11% were adolescent. 70% were from rural area, 68% were poor, 50% didn't have even primary education, 92% adolescent never use contraceptive, 56% had no ANC. Anemia (62%) and hypertension (24%) were prevalent among the pregnant adolescents. Complication rate were more in adolescent group, like preeclampsia (12%), eclampsia (14%), preterm labor (12%), prolonged labor (14%), obstructed labor (8%). Caesarean rate was higher (66%) in adolescent pregnancy.

Conclusion: Majority of the adolescents had no ANC, complication rate were more prevalent in adolescent group. Adverse perinatal outcome was found in adolescent pregnancy.

Key words: Adolescent pregnancy, Pregnancy outcome.

Mugda Med Coll J. 2022; 5(2): 55-59

INTRODUCTION

Adolescent pregnancy is a major global problem due to the wide range of health effects and socioeconomic consequences both for mothers and their children. Globally about 17 million adolescent girls give birth each year comprising 11.0% of all births worldwide.

1. Dr. Nowshafreen Chowdhury, Assistant Professor, Gynae & Obstetric Department, Mugda Medical College, Dhaka.
2. Dr. Riffat Rahim, Assistant Professor, Gynae & Obstetric Department Mugda Medical College, Dhaka
3. Dr. Laila Nazneen Khan, Assistant Professor, Gynae & Obstetric Department, Mugda Medical College, Dhaka
4. Dr. Kamrunnahar Sweety, Assistant Professor, Gynae & Obstetric Department, Mugda Medical College, Dhaka
5. Dr. Pervin Akther, Assistant Professor, Gynae & Obstetric Department, Mugda Medical College, Dhaka

Address of correspondence: Dr. Nowshafreen Chowdhury, Assistant Professor, Gynae & Obstetric Department, Mugda Medical College, Dhaka, Phone: 01771468699, Email: dr.nowshafreen@gmail.com

Majority of these births (95.0%) occur in low and middle income countries¹. The prevalence of adolescent motherhood is much higher in low income countries as compared to high income countries¹. Half of all adolescent births occur in just seven countries: Bangladesh, Brazil, the Democratic Republic of the Congo, Ethiopia, India, Nigeria and the United States¹. Bangladesh has the highest adolescent fertility rate in South Asia where 1 girl in 10, has a child before the age of 15, whereas 1 in 3 adolescent becomes mother or pregnant by the age of 19²⁻⁴. Despite remarkable progress in human development adolescent childbearing is highly persistent in Bangladesh mostly due to the comparatively higher prevalence of child marriage^{5,6}.

To a vast majority of adolescent in the developing world, family planning information and services are

not accessible. The effect of time on adolescent motherhood can be attributed to the increasing trend of female education, labor force participation, women empowerment and knowledge dissemination in Bangladesh. In connection with this it is worthwhile to mention that Bangladesh is one of the few developing countries that has achieved most of the Millennium Development Goals including reducing poverty, increasing female education, and reducing gender inequality^{7,8}.

The study was conducted to find out the common problems of adolescent pregnancy which would help to develop appropriate measures to reduce these and eventually contribute to ensure quality life of adolescents and healthy life of mothers and children in particular in Bangladesh.

MATERIALS AND METHODS

This comparative cross-sectional study was carried out in Munshigonj General Hospital, Munshigonj from 1st January to 31st December, 2018. Respondents were admitted patients who had delivered either vaginally or by caesarian section. Women aged 15 to 19 years selected as adolescent and those aged 20 to 40 years selected as adult. A purposive and convenient sampling method was done to obtain the samples, 50 adolescents and 50 adults. After formulation of aims and objectives of the study, semi-structured questionnaire was made for recording all relevant parameters. Information were recorded by face to face interview of the respondents and from patient's hospital file about socio-demographic condition, contraceptive method, antenatal checkup, antenatal and intrapartum complications, mode of delivery, perinatal outcome and clinical state on admission. Antenatal complication like abortion, molar pregnancy, hyperemesis gravidarum, preterm labor, prelabor rupture of membrane, preeclampsia, eclampsia, antepartum hemorrhage, malpresentation were recorded. Intrapartum complication like eclampsia, prolonged labor, obstructed labor or postpartum hemorrhage were also recorded. Mode of delivery whether by normal vaginal delivery or by caesarian section and perinatal outcome whether baby was normal, cried well just after birth or asphyxiated or stillborn were also noted. After obtaining the data statistical analysis of the results was performed using SPSS (Statistical Package for the Social Sciences) version 20 software. The obstetrical parameters of the adolescent and adult groups were compared using the z score test. Statistical significance was set at ≤ 0.05 level and confidence interval at 95% level.

RESULTS

Total admitted pregnant women were 780. Among them 86 (11.03%) were adolescent and rest 694 (88.97%) were adult.

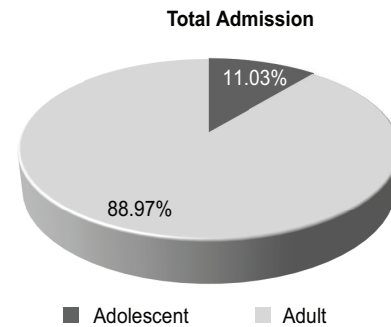


Fig.-1: Percentage of adolescent pregnancy in total admission

Table I: Distribution of habitancy

Resident	Adolescent		Adult	
	n=50	%	n=50	%
Urban	15	30	40	80
Rural	35	70	10	20

Adolescent pregnancy was higher (70%) in rural habitants.

Table II: Educational status

Education	Adolescent		Adult	
	n=50	%	n=50	%
Illiterate	17	34	13	26
Can sign only	8	16	9	18
Primary	21	42	12	24
Secondary	4	8	16	32

Less literacy rate was observed in adolescent group.

Table III: Distribution of family income per month

Income (Taka)	Adolescent		Adult	
	n=50	%	n=50	%
<10000	34	68	25	50
10000-15000	9	18	12	24
>15000	7	14	13	26

Most of the adolescent (68%) come from low income group.

Table IV: Use of contraceptives

Use	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
Don't use	46	92	21	42	9.4071	.00
Irregular	2	4	9	18	3.2323	.00
Regular	2	4	20	40	7.1291	.00

92% adolescent never use contraceptive.

Table V: Antenatal checkup

ANC	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
Regular	14	28	23	46	2.4425	0.0146
Irregular	8	16	7	14	0.3960	0.6892
No ANC	28	56	20	40	2.8486	0.0044

Most of the adolescent (56%) had no ANC.

Table VI: Clinical state on admission

Parameter	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
Anemia	31	62	19	38	3.6449	.00
Edema	12	24	11	22	-	-
Hypertension	12	24	2	4	9.0011	.00
Proteinurea	6	12	2	4	4.4915	.00

Anemia (62%) and hypertension (24%) were prevalent among the pregnant adolescents.

Table VII: Antepartum and Intrapartum complications

Complication	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
Hyperemesis	1	2	1	2	-	-
Preeclampsia	6	12	1	2	4.5001	-
Eclampsia	7	14	0	0	-	-
IUD	1	2	1	2	-	-
Preterm labor	6	12	2	4	3.8065	0.423
Malpresentation	5	10	0	0	-	-
Prolonged labor	7	14	2	4	4.605	0.424
Obstructed labor	4	8	2	4	1.1533	0.2460
Scar tenderness	0	0	8	16	-	-
APH	0	0	0	0	-	-
Oligohydramnios	2	4	1	2	1.1533	0.2460
No complication	13	26	31	62	1.1533	0.2460

Complication rate were more in adolescent group, like preeclampsia (12%), eclampsia (14%), preterm labor (12%), prolonged labor (14%), obstructed labor (8%).

Table VIII: Mode of delivery

Mode	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
NVD	22	44	29	58	4.6162	0.00
LSCS	28	56	21	42	3.5714	-

Caesarean rate was higher (56%) in adolescent pregnancy.

Table IX: Perinatal outcome

Condition	Adolescent		Adult		Test of significance	
	n=50	%	n=50	%	Z	P
Healthy	28	56	36	72	1.4286	0.1528
Asphyxiated	18	36	10	20	1.5523	0.1212
Stillborn	4	8	4	8	-	-

Better perinatal outcome found in adult group.

DISCUSSION

Study revealed that most of the adolescent pregnant women were hailing from rural area (70%) and of low socio-economic condition (68%) with poor literacy rate (92%). Similar features were also observed in Islam M.M. et al study⁹ showed teenage girls in the poorest wealth quintile were more likely to experience adolescent motherhood than the richest wealth quintile. Adolescents who had no education were found to have 2.76 times higher odds of adolescent motherhood than their counterparts who had higher than secondary education. Consistent with the prevalence of adolescent motherhood among teenage girls, the rate of childbearing before age 20 was found to be lower in urban areas than in rural areas. Similarly, the rate of adolescent motherhood among women was substantially higher among lower educated women. The inverse association between wealth index and the rate of adolescent motherhood is also clearly evident among adult women as well⁹.

Acceptance of contraceptives is very low in adolescent. In this present study 92% never use any contraceptive, while in adult group this number was 42% only. A study conducted by United Nations Children's Fund¹⁰ mentioned that though Bangladesh has made considerable progress in increasing overall contraceptive prevalence rate (44.6% in 1993-94 to 62.4% in 2014) it was still much lower among married teenage girls compared to adult

women. For instance, in 2014 the prevalence of contraceptive use (any method) among teenage girls was only 51.2% compared to 67.7% among adult women. Part of the reason was that in most cases teenage girls take their desired number of children at younger ages to fulfill the expectation of husband and in-laws or family members despite higher risk of having children before age of 20 yrs¹⁰.

Adolescents are not fully physically developed, at menarche a young girls pelvis has not finished growing. Therefore, pregnancy and birth at a young age pose serious risks for both mother and child. The present study revealed that 62% adolescent were anemic whereas only 38% were anemic in adult group. 24% adolescent became hypertensive during pregnancy, 12% developed preeclampsia, 14% suffered from eclampsia while in adult group only 2% were hypertensive, 2% developed preeclampsia and no one suffered from eclampsia. Adolescent pregnancy culminated in preterm labor in 12%, prolonged labor in 14% and obstructed labor in 8% cases. Adult group showed 4%, 4% and 2% respectively. Study conducted by Rahman M. et al¹¹ found that maximum adolescents suffered from anemia during the time of pregnancy. About 98% adolescent suffered delivery complications like eclampsia, prolonged labour, excess hemorrhage, and delay in delivery of placenta whereas only 16% suffered these complications that were pregnant at

age 20 years and later. More than fifty percent adolescent undergo prolonged delivery and very few (2%) adolescent delivered babies safely¹¹. Several other studies also observed the pregnancy complications like hypertension, eclampsia, iron deficiency anemia were common among adolescent¹²⁻¹⁶.

Phuong Hong Nguyen¹⁷ study in Bangladesh showed greater risk of anemia, low birth weight affecting the lifelong well-being of a young mother and her child. Economic risks also weighed heavily on younger mothers, who demonstrated higher rates of early school dropout which leaves them less empowered in the long term and thus more vulnerable to sustained poverty¹⁷.

CONCLUSION

Adolescent pregnancy is universally accepted as high risk pregnancy. Majority of the adolescents had no antenatal care & complication rate were more prevalent in adolescent group. Adverse perinatal outcome was also observed in adolescent pregnancy. To reduce this problem multiple programme should be undertaken on national level targeting firstly the adolescents and secondly their parents as well as community and social leaders.

REFERENCES

1. World Health Organization. Adolescent pregnancy: WHO fact sheet 2014 [cited 2017 Nov 11].
2. United Nations Development Programme. Human development report 2016. New York; UNDP: 2016.
3. United Nations Fund for Population. State of world population 2013. Motherhood in childhood. Facing the challenge of adolescent pregnancy. New York; UNFPA: 2013.
4. Government of Bangladesh. Bangladesh Population Policy-2012. Dhaka; Ministry of Health and Family Welfare: 2012.
5. Islam MM, Gagnon AJ. Child marriage-related policies and reproductive health in Bangladesh: a cross-sectional analysis. *Lancet* 2014; 384: S8.
6. Hossain MB, Ghafur T, Islam MM, Hasan MS. Trends, patterns and determinants of marriage in Bangladesh. Dhaka: Bangladesh Bureau of Statistics (BBS), Statistics and Informatics Division (SID), Ministry of Planning, Government of People's Republic of Bangladesh: 2015.
7. Government of Bangladesh. Millennium development goals: Bangladesh progress report-2015. Dhaka; Bangladesh Planning Commission: 2013.
8. United Nations. The Millennium Development Goals Report 2015. New York; UN: 2015.
9. Islam MM, Islam MK, Sazzad MH, Hossain MB. Adolescent motherhood in Bangladesh; Trends and determinants: 2019.
10. United Nations Children's Fund. The state of the world's children 2011. Adolescence: an age of opportunity. New York; UNICEF: 2011.
11. Rahman MM, Hasan M, Akter S, Sultana P. Adolescent pregnancy complication and wastage in Bangladesh.
12. Sharma AK, Chhabra P, Gupta P, Aggarwal GP Lyngdoh T. Pregnancy in Adolescent: A Community based study. *Indian J. Prev. Soc. Med* 2003; 34: 25-32.
13. Lyngdoh T. Adolescent pregnancy and its outcome: A study in a resettlement colony of east Delhi. Thesis submitted to the University of Delhi for the degree of MD (Community Medicine); New Delhi: 2002.
14. Sharma AK, Verma K, Khatri S, Kannan AT. Pregnancy in adolescents: A study of risks and outcome in Eastern Nepal. *Indian Pediatr* 2001; 38(12): 1405-9.
15. Ananadalakshmy PN, Buckshee K. Teenage pregnancy and its effect on maternal and child health - a hospital experience. *Indian J Med Sci* 1993; 47(1): 8-11.
16. Padte K, Pal MN, Pavse J. Review of teenage pregnancy in Goa. *J Obstet Gynecol India* 1989; 39: 472-4.
17. Phuong Hong Nguyen. New research shows heightened risks of adolescent pregnancy in Bangladesh. 2017.