

# A Study of Factors Associated with Teenage Pregnancies in Comparison with Pregnant Women of 20-29yrs in Boko, Assam

Dr Moitreyee Saloi<sup>1</sup>, Dr Kanika K Baruah<sup>2</sup>, Dr Jutika Ojah<sup>3</sup>

<sup>1</sup>PGT, <sup>2</sup>Associate Professor, <sup>3</sup>Professor & Head,  
Department of Community Medicine GMCH, Guwahati

Corresponding Author: Dr Moitreyee Saloi

## ABSTRACT

Teenage pregnancy also called as adolescent pregnancy is a major public health problem worldwide bearing serious social and medical implications relating to maternal and child health. It is a problem that affects nearly every society developed and developing alike.

**Objectives:** The present study is undertaken to find the incidence of teenage pregnancy & to study the different socio demographic characteristics and to compare the complications of teenage primigravida mothers with those of 20-29 yrs aged mothers.

**Materials and methodology:** The study was undertaken in the BOKO CHC, which is a rural health training centre under GMCH over a period of 4 months from March to June 2016. All the women coming for delivery during that period were included except those that were referred to tertiary care hospital. Data were obtained from the mothers after personal interview and review of medical records. After recording their age they were divided into two groups teenage or the study group and the comparison group.

**Results:** Teenage pregnancy comprised 25% of total. The prevalence of anemia was significantly higher ( $p < .05$ ) in the women in teenage group than in comparison group. Preterm delivery occurs significantly more in study group. The incidence of LBW was significantly higher among the group of teenagers than in comparison group.

**Conclusion:** The study shows that anemia, preterm delivery & LBW were more prevalent among teenage than among the women who were 20-29 yrs old. This indicates the need for enhancing family welfare measures to delay the age at first pregnancy, thereby reducing the multiple complications that may occur in the young mother and her newborn baby.

**Key words:** Teenage pregnancy, LBW

## INTRODUCTION

Teenage pregnancy is a major public health problem worldwide. Teenage pregnancy is defined by WHO as a period from 10-19years. <sup>(1)</sup> During this period, the structural, functional and psychosocial development occurs in a girl and prepares her for motherhood. About 16 million girls aged 15 to 19 and some 1 million girls

under 15yrs give birth every year-most in low- and middle-income countries.

The 2014 World Health Statistics indicate that the average global birth rate among 15 to 19 year olds is 49 per 1000 girls. Country rates range from 1 to 299 births per 1000 girls, with the highest rates in sub-Saharan Africa. Babies born to adolescent mothers face a substantially higher risk of dying than those born to

women aged 20 to 24. According to WHO report Sept 2014 early childbearing increases the risks for both mothers and their newborns. <sup>(2)</sup> In low- and middle-income countries, babies born to mothers under 20 years of age face a 50% higher risk of being still born or dying in the first few weeks versus those born to mothers aged 20-29.

The factors leading to a teenage pregnancy are different in the Western world and in India. In India, teenage pregnancy is mostly because of early marriages and early child bearing. Whatever be the cause, the impact of teenage pregnancy is on the teenage girl and her future generations. Teenage pregnancy affects the education of the girl child. Better education and a delay in family formation would give her better opportunities for skill development. Mothers with less education are less likely to educate their children. Teenage girls often get pregnant with older husbands. This large spousal age gap facilitates power-differentials between the girl and her partner. Teenage mothers are at increased risk of pregnancy complications like anaemia and preterm labour. Inadequate antenatal care, lack of education and poor socioeconomic conditions also affect the outcome. <sup>(3-5)</sup>

According to UNFPA, the number of adolescent or teenage pregnancy depends on the extent of adolescent population in the world. The total population of adolescents will increase from 1.2 billion to 1.3 billion from 2010 to 2030, in spite of forecasted declines in fertility. By 2030, 15% of the female population worldwide will be represented by adolescents. <sup>(6)</sup>

Child marriage and early confinement are well accepted custom in India. Poverty and ignorance magnifies this problem to a greater extent. <sup>(10)</sup> According to National Family Health Survey-3, the incidence of teenage pregnancy in India was 16%, with majority of them occurring in uneducated rural population. The present study was conducted in BOKO CHC to compare the obstetric outcome between

teenage pregnancies and pregnancies in mothers of 20-29 years age group.

### **Objectives:**

1. To determine the prevalence of teenage pregnancy
2. To study the socio demographic characteristics and
3. To compare the complications of teenage mothers with those of primi mothers aged 20-29 yrs.

### **MATERIALS AND METHODS**

The present study was a hospital based cross sectional study carried out in Boko CHC during the period from March to June 2016. Data was obtained from all the women coming for delivery during the study period. Those who were referred were excluded from our study. After calculating their age they were divided into two groups. Women aged <20yrs were considered as study subjects and they were compared with a comparison group comprising of gravida matched women of the age group 20-29 yrs. This group was chosen as the comparison group as adverse outcomes were expected to be least in this group. <sup>(7)</sup> Candidates having major illnesses prior to pregnancy which could affect the outcome of pregnancy like heart disease, hypertension, diabetes mellitus and hypothyroidism were excluded from the study.

Data collection was done with the help of predesigned and pretested schedule, using interview method.

The major complications analysed were anemia, preterm labour and low birth weight. Anemia was defined as a haemoglobin level below 11 gm%. Preterm labour was defined as delivery before 37 weeks of gestation. Low birth weight was defined as baby weight less than 2500 gm. <sup>(7)</sup>

Data was expressed as frequencies and percentages and was analysed by Chi square test for significance. Relative risk and 95% confidence interval for relative risk was calculated. A p value of <0.05 was

considered to indicate statistical significance.

## RESULTS

As shown in table 1 out of the total 238 obstetric admissions 60 were below 20 yrs of age, giving 25% prevalence of teenage pregnancies.

**Table 1: Prevalence of teenage pregnancies.**

Admission	Number	Percentage
Total number of obstetric admission	238	100
Total number of teenage pregnancies	60	25

As shown in table 2 Most of the women in study group were Hindu (66.7%) followed by Muslim (21.7%) and Christian (11.6%). Similarly in the comparison group most of them were Hindu (65.2%) followed by Muslim (19.6%) and Christian (15.2%). Regarding educational status 13.8% of the study group & 21.7% of comparison group were illiterate. In the study group 27.7% were educated up to primary section and 46.7% up to secondary section and 13.3% were upto intermediate level. Similarly in the comparison group 39.1%, 8.7% & 30.5% were educated upto primary, secondary and intermediate level respectively. Among the study group 40% of them falls under S E status class 1, 23.3%

class 2, 16.7% class 3, 13.4% class 4 and 6.6% class 5. In the comparison group class 1-35.7%, class 2- 21.7%, class 3- 16.3%, class 4- 14.3% and class 5-12%.

**Table 2: Distribution according to socio demographic characteristics**

Demographic characteristics		Study group (%)	Comparison group (%)
Religion	Hindu	40(66.7)	60(65.2)
	Muslim	13(21.7)	18(19.6)
	Christian	7(11.6)	14(15.2)
Occupation	Housewife	40(66.7)	78(84.8)
	Labour	16(26.7)	6(6.5)
	Employed	4(6.6)	8(8.7)
Education	Illiterate	8(13.3)	20(21.7)
	Primary	16(26.7)	36(39.1)
	Secondary	28(46.7)	8(8.7)
	Intermediate	8(13.3)	28(30.5)
S E Status	Class 1	24(40.4)	33(35.7)
	Class 2	14(23.3)	20(21.7)
	Class 3	10(16.7)	15(16.3)
	Class 4	8(13.4)	13(14.3)
	Class 5	4(6.6)	11(12)

In table 3 the prevalence of anemia in the study subjects was found to be 75% and in the comparison group 57.6% and it was significantly associated with the study subjects. Similarly prevalence of LBW and preterm labour were found to be significantly associated with the study group or the teenage pregnancy. However during our study period there was no case of stillbirth or IUFD or maternal death in both the groups.

**Table: 3 Distribution of pregnancies according to complication of pregnancy**

Complication		Study subjects (%)	Comparison group (%)	Statistical test
Anemia	Present	45(75)	53(57.6)	$\chi^2 < 0.05$
	Absent	15(25)	39(42.4)	
Preterm delivery	Present	18(30)	12(13)	$\chi^2 < 0.05$
	Absent	42(70)	80(87)	
LBW	Present	6(10)	28(30)	$\chi^2 < 0.05$
	Absent	54(90)	64(70)	

## DISCUSSION

Adolescent pregnancy continues to be a major public health problem in India. In our study, we got the prevalence of teenage pregnancy as 25% which was comparable to the prevalence got by Pranay Gandhi *et al* (19.9%), Bratati Banarjee *et al* (24.17%). But T Thekkekkara *et al* got 50%, Gazala Yasmin *et al* got 5.10%, Dr Rupakala B.M *et al* got 9.76%, Gazala Yasmin *et al* got 9.76%.<sup>(8-13)</sup> Anemia is a common complication of teenage

pregnancy. In our study 75% of the teenagers were anemic.

Other studies showed the incidence of anemia ranging from 3% to 62.96%. Atmaja Nair *et al* reported 40.7%, Pranay Gandhi *et al* reported 52.44%, Gazala Yasmin *et al* reported 8.12%, Dr Rupakala *et al* reported 3.1%, Bratati *et al* reported 62.96% 47.3%.<sup>(8,10,11,13,14)</sup> Pranay Gandhi *et al*. observed significant increase in the incidence of anemia ( $P < 0.05$ ) in pregnant teenagers as compared with the

pregnant in the 20-29 year old age group(8) which is similar to the present study finding. However a study conducted among mothers of various age groups showed that anemia was lower in teenage mothers (33%) in comparison with those who were 20-30 years old (62.1%) and those who were in the 31+ year old group (71%).<sup>(17)</sup> Prematurity rates have been reported to be higher in teenage mothers than in the older group by many authors. In this study, the incidence of preterm delivery among the teenage mothers was 30% compared to 13% in the comparison group. Percentage of preterm delivery in teenagers in this study is similar as reported by Gazala Yasmin *et al* 27.45%. Other studies reported incidence ranging from 3-27%. Atmaja Nair *et al* 18.22%, Pranay Gandhi *et al* reported 21.95%, Prianka Mukhopadhyay *et al* reported 27.7%, M .S. Chahande *et al* reported 16.2%, T. Thekkekkara *et al* reported 3%, Dr Rupakala B.M *et al* reported 7.3%.<sup>(8,10,12,14,15)</sup> We have found that 10% of babies born to teenagers were LBW. Some other studies showed higher incidence ranging from 16-65%.<sup>(9,11,12,15-17)</sup>

## CONCLUSION

The present study was an attempt to throw light on the different socio demographic characteristics relating to teenage pregnancy and their outcomes and complications compared to older (20-29 years) primigravida mothers. This study highlights that nearly one fourth of pregnancies occurs in teenage women, who have significantly higher rates of complications. It was found that the teenage mothers were from a socioeconomically-disadvantaged background with lower levels of education. They developed more perinatal complications, such as preterm births, and low-birth weight compared to the older mothers. The adverse outcomes of teenage pregnancy could be attributed not only to lower maternal age but also to their relatively-disadvantaged socioeconomic background.

To address this multifaceted problem, we should make provisions to delay the age of marriage. Law permits the marriage of a girl only after the age of 18. By encouraging delayed marriages, delayed child bearing and wider spacing between births, communities and families can contribute to a healthier population. Education, nutritional support, and family planning, along with creating awareness among the community and also the school girls about the importance of delaying marriage, reproductive health, family life, and population education will definitely help in transforming today's adolescent girls into healthy and responsible women, giving birth to a healthy future generation.

## REFERENCES

1. WHO. Programming for adolescent health and development. WHO Technical Report Series 886. Geneva: WHO; 1999: 1-217.
2. WHO Adolescent pregnancy updated factsheet September 2014
3. Bhaduria S. Teenage pregnancy: A retrospective study. J Obstet and Gynecol of India 1991;41:454-6.
4. Kale KM. Socio-medical correlates of teenage pregnancy. J Obstet and Gynecol of India 1996;46:180-4.
5. Pal A, Gupta KB, Randhawa I. Adolescent pregnancy: a high risk group. J Indian Med Assoc, 1997;95:127-8.
6. Edilberto Loaiza, Mengjia Liang. Adolescent pregnancy. In: Edilberto Loaiza, Mengjia Liang, eds. A Review of the Evidence UNFPA. New York: UNFPA; 2013: 8-10
7. Park K. Parks text book of preventive and social medicine. In: Park K, eds. 21st ed. Jabalpur, India: M/s. Banarsidas Bhanot Publishers; 2011.
8. Pranay Gandhi, Sunita Sharma, Rahul Gite. A study of teenage pregnancies in rural area. Indian J of Applied research 2014;4 :506-08.

9. Bratati Banerjee, GK Pandey, Debashis Dutt, Bhaswati Sengupta, Maitraeyi Mondal, Sila Deb. Teenage pregnancy: A socially conflicted health hazard. *Indian J. Community Med* 2009;34: 227-31.
10. T. Thekkekkara, J. Venu. Factors Associated with Teenage Pregnancy .*Indian J. Community Med* 2006; 31:83.
11. Gazala Yasmin, Aruna Kumar, Bharti Parihar. Teenage Pregnancy - Its Impact on Maternal and Fetal Outcome. *International J Scientific Study* 2014; 1 :9-13.
12. Dr. Rupakala B M1, Dr. Shruthi A G2, Dr. Nagarathnamma R3. A Study on Teenage Pregnancy and its Maternal and Fetal Outcome. *International J. Science and Research* 2016;5: 2486-89.
13. Gazala Yasmin1, Aruna Kumar2, Bharti Parihar3. A study of sociodemographic factors of teenage pregnancy at a tertiary care centre. *J. Evol. Med. Dent. Sci* 2014;3:1020-25
14. Atmaja Nair, Sumangala Devi. Obstetric outcome of teenage pregnancy in comparison with pregnant women of 20-29 years: a retrospective study. *Int J Reprod Contracept Obstet Gynecol.* 2015;4 : 1319-23.
15. Prianka Mukhopadhyay1, R.N. Chaudhuri2, Bhaskar Paul3. Hospital-based Perinatal Outcomes and Complications in Teenage Pregnancy in India. *J Health Popul Nutr* 2010;28:494-500
16. AK Sharma1, P. Chhabra2, Pushpa Gupta3, QP Aggarwal 4, T Lyngdoh5. Pregnancy in adolescents: A community based study. *Indian J. Prev. Soc. Med* 2003;34:23-32
17. Biswas A, Goswami TK. Obstetrical behaviour & perinatal mortality in urban population. *J Obstet Gynecol India* 198;33:42-5.

How to cite this article: Saloi M, Baruah KK, Ojah J. A study of factors associated with teenage pregnancies in comparison with pregnant women of 20-29yrs in Boko, Assam. *Int J Health Sci Res.* 2017; 7(4):18-22.

\*\*\*\*\*