

## A Comparative Study of Obstetric Profile of Primi Teenage and Non-Teenage Mothers

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### **Abstract:**

**Introduction:** Early marriages and teenage pregnancies are important contributing factors for high maternal as well as neo-natal morbidity and mortality.

**Objectives:** To assess the obstetric profile of teenage and non-teenage primi mothers and to determine the association among them.

**Methodology:** A cross-sectional study was conducted at OB/Gynac dept at a tertiary centre from jan to june of year 2016. 90 eligible teenage primi mothers and equal number of non-teenage primi mothers admitted to tertiary centre for delivery were included, interviewed and observed for obstetric outcome and it's complications according to pre-designed structured proforma. Frequency percentage distribution and association was determined by applying tests of significance.

**Observations:** Magnitude of teenage primi pregnancy was 6% during study period and 88% were muslims, 74% were housewives and 70% belonged to lower class with mean age at marriage and delivery was 17.5 yrs and 18.5 yrs respectively. 81.7% teenage primi mothers were anaemic and the percentage of obstetric complications like PIH, Oligohydramnios, Foetal distress and PROM among teenage primi mothers was 24%, 8.6%, 6.4% and 1% which was higher than nonteenage mothers. IUGR, cord prolapse, breech presentation and abruption placenta also reported among teenage primi mothers, however absent among non-teenage mothers. 55.9% teenage mothers were delivered before expected date of delivery and proportion of low birth weight baby was also high (39.8%) in teenage mothers than non-teenage mothers.

**Conclusion:** Adolescent pregnancy is an issue that calls for more education & support to encourage girls to delay motherhood until they are ready physically and mentally.

**Keywords:** Teenage, Primipara, Obstetric profile, Anaemia

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### I. Introduction

The transition from childhood to adulthood may be referred to as 'adolescence' or 'teenage', which has been defined by the World Health Organization as the period between 10-19 years<sup>1</sup>. The structural, functional, and psychosocial developments occurs in this period, however teenage pregnancy assuming additional responsibility of motherhood. Early marriage and teenage pregnancies are contributing factors for high maternal and neo-natal mortality and morbidity<sup>2</sup>. Teenage pregnancy is pregnancy in a female/girl under the age of 20 yrs (when the pregnancy ends)<sup>3</sup>. Teenage pregnancy rates vary between countries because of differences in levels of sexual activity, level of general sex education and access to affordable contraceptive methods. Teenage pregnancy is a common occurrence in India, due to factors such as early marriage, poor education, lack of health care services, poverty, cultural factors etc<sup>4-5</sup>. Similarly due to environmental and geographical influences, girls reaching the puberty at younger age and high specific fertility rate in such age group observed. Annually, 13 million children are born to women under age 20 worldwide and among them, >90% teenage deliveries mainly from developing countries<sup>7</sup> and the complications of pregnancy and childbirth are the leading cause of mortality among women between the ages of 15 and 19 in such areas<sup>8</sup>. In India teenage

pregnancy rate varies from 8 – 14%. The obstetric outcome of teenage pregnancy is influenced by factors such as socio-demographic, economic, health

care and others. Maternal and perinatal morbidity & mortality in teenagers is influenced by medical complications like anaemia, cephalopelvic disproportion (CPD) and social problems like unwanted pregnancy etc<sup>6</sup>.

### II. Material & Methods

A Cross-sectional study was conducted at Ob/Gynac dept. of a tertiary centre among primi teenage and non-teenage pregnant mothers from January to june of year 2016. Total 90 teenage primi mothers admitted for delivery during study period and equal number of non-teenage primi mothers, age > 20 but < 30 yrs for the same without any systemic illness were enrolled for present study. Data was collected from study subjects by using a pre tested, structured proforma after verbal consent. The proforma include socio-demographic, economic, reproductive as well as information related to complications of pregnancy and outcome of it. The data was

collected from study subjects in the presence of female relatives in hospital by personal interview method and complications of pregnancy and its outcome was reported by personal observation as well as case paper records.

**Ethical considerion:** Clearance for the study was taken from the hospital authority. Informed verbal consent was taken from the subjects.

**Statistics:** Data so collected was compiled into MS Excel & analysed by applying statistical software SPSS Version 17. Frequency percentage distribution, mean, SD was calculated. Student t test was applied to find out difference and chi-square test was applied to determine the association.

### III. Results

Total 90 teenage primi mothers were delivered at tertiary centre during study period which came around 6% of total deliveries.

**Table 1: Demographic and Reproductive distribution of study subjects**

Study variable		Teenage primi mothers	Non-Teenage primi mothers
Mean age at delivery (in yrs)		18.5	22.9
Mean age at marriage (in yrs)		17.5	21.5
Religion	Muslim	80	79
	Hindu	10	11
Occupation	Housewife	67	78
	Working	23	12
Socioeconomic status	Upper class	27	38
	Lower class	63	52
Education	Illiterate	5	4
	Educated	85	86

Mean age at marriage and primi delivery was 17.5 and 18.5 yrs among teenage, however it was 21.5 and 22.9 yrs among non-teenage mothers. Majority of mothers were muslims and housewives but 70% teenage were from low economic class (Modified Prasad classification)(Table 1).

**Table 2: Anaemia and Obstetric Complications of pregnancy among teenage and non-teenage mothers**

	Teenage primi mothers Freq. (%)	Non-teenage primi mothers Freq. (%)	$\chi^2$ , (p value)
Anemia:			
Present(Hb<10)	74 (81.7)	28 (31.2)	48.3, (0.001*)
Absent(Hb>10)	16 (18.3)	62 (68.8)	
Obstetric Complications:			
Present	43 (48.38)	21(24.73)	10.22, (0.001*)
Absent	47 (51.62)	69(75.27)	
PIH	21(24)	11(13.9)	
Oligohydramnios	8(8.6)	5(5.3)	
PROM	1(1.0)	1(1.0)	
Fetal distress	6(6.4)	4(4.3)	
IUGR	2(2.1)	00	
Cord prolapsed	1(1.0)	00	
Breech	3(3.2)	00	
Abruptio placenta	1(1.0)	00	

Proportion of Anaemia was high (81.7%) among teenage mothers as compared to non-teenage mothers (31.2%) and obstetric complications also high(48.32%) among teenage mothers than non teenagers (24.73%).Among the teenagers proportion of obstetric complications like PIH (24%), Oligohydramnios (8.6%), Fetal distress (6.4%) was high than non-teenagers (Table 2).

**Table 3: Obstetric profile of teenage and non teenage primi mothers**

		Teenage primi mothers Freq. (%)	Non-teenage primi mothers Freq. (%)	$\chi^2$ test,( p value)
Delivery	Before EDD	50(55.9)	40(44.1)	6.25(0.04*)
	On&after EDD	40(44.1)	50(55.9)	
Type of delivery	Vaginal	57(63.4)	71(78.5)	4.41(0.03*)

	LSCS	33(36.6)	19(21.5)	
Outcome	Live	87(96.8)	89(98.9)	1.02(0.31)
	Still birth	3(3.2)	1(1.1)	
Birth wt.	LBW	36(39.8)	15(16.1)	12.9(0.001*)
	Normal wt.	54(60.2)	75(83.9)	

55.9% teenage mothers were delivered before EDD, whereas 50.5% non-teenage mothers were delivered on and after EDD and proportion of mode of delivery by LSCS was higher (36.6%) in teenage mothers as compared to non-teenage mothers (21.5%). The proportion of LBW was high (39.8%) in teenage mothers as compared to non-teenage mothers(16.1%)(Table 3).

#### IV. Discussion

Our cross sectional study from jan to june 2016 at VS hospital ahmedabad revealed the proportion of teenage primi pregnancy was 6%, similar observations also reported by Chahande MS et al<sup>9</sup>. among primi pregnancies delivered in Nagpur. Bhalerao AR et al<sup>6</sup>. in Mumbai, however Dhuhashi SS et al<sup>3</sup>. found 4.4% teenage pregnancy rate in Mumbai. The difference in results was mainly due to rural study area. Mean age at marriage and primi delivery among teenage mother was 17.5 and 18.5 yrs in our study and results were comparable with study conducted by Chahande MS et al<sup>9</sup> (16.5yr & 18.5yr). Study found high proportion (70%) of teenage mothers were from lower economic class as compared with non-teenage. Similar observations also reported by Chahande MS et al<sup>9</sup>, Pal A et al<sup>10</sup>. and Asha Pratinidhi<sup>11</sup> among teenage mothers. Our study revealed proportion of anaemia and overall complications during pregnancy among teenage mothers were 81.7% and 48.38% and which was higher as compared to non-teenage mothers. The individual proportion of complications of pregnancy like PIH, Oligohydramnios, Fetal distress was 24%, 8.6% and 6.4% among teenage mothers. Study conducted by Bhalerao AR et al<sup>6</sup>. found 25.5% mothers were anaemic. Dhuhashi SS et al<sup>3</sup>. also found 13.3% teenage mothers with PIH and anaemia was reported in 31% mothers.

The difference in proportion of anaemia was mainly due to rural residence, poverty, low level of education, cultural and faulty cooking and dietary factors. Proportion of delivery by caesarean section was higher, 36.6% among teenage mothers as compare to non-teenage, however a study conducted by Bhalerao AR et al<sup>6</sup> was found 6% rate of caesarean section among teenage mothers and difference was mainly due to high proportion of complications of pregnancy in our study like PIH, anaemia, pre-term labour cephalopelvic disproportion etc. Still birth rate was 3.2% in our study and which is higher than nonteenage mothers and comparable observations also reported by Chahande MS et al<sup>9</sup>. and Ambadekar NN et al<sup>12</sup>. as 2.4% and 3.2%. Pre-term labour was found in 55.9% teenage mothers and which was higher as compared to non-teenage mothers, however proportion of pre-term labour was 4.6%, 10% and 16% in teenage mothers among study conducted by Ambadekar NN et al<sup>12</sup>. Dhuhashi SS et al<sup>3</sup> and Bhalerao AR et al<sup>6</sup> and difference in results was mainly due to anaemia, PIH, lack of access to health care services, poor nutrition, deficit in health care services or poverty. Present study found 39.8% babies born to teenage primi were having Low birth weight as compared to non-teenage. Study conducted by Ambadekar NN et al<sup>12</sup>. Bhalerao AR et al<sup>6</sup> and Sarkar CS et al<sup>13</sup> observed proportion of LBW babies was 39.5%, 46.2% and 30% among teenage mothers and results were comparable with our study.

#### V. Conclusion

The teenage pregnancy is important health issue which causes high maternal complications during pregnancy and it also affects the outcome of delivery. Need to highlight the issues related with teenage pregnancy and develop a firm health policy and awareness to avoid morbidity and mortality associated with teenage pregnancy and improve the outcome. Though in our study literacy rate is high in both teenage and non teenage mothers, awareness regarding complications of early marriage and teenage pregnancy is less so teenage girls in the schools with their parents need to be educated regarding these complications of teenage pregnancy. So along with formal education there is a need of education regarding Adolescent health and Sex education to reduce complications of teenage pregnancy.

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