

## ORIGINAL ARTICLE

# Frequency of Teenage Pregnancy and Frequency of its Complications

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## ABSTRACT

**Objectives:** To determine the frequency of fetomaternal complications among teenage pregnant women.

**Study design:** Descriptive study, cross-sectional study.

**Settings:** Department of Obstetrics & Gynecology, Civil Hospital Karachi

**Study duration:** 4<sup>th</sup> February 2019 to 3<sup>rd</sup> August 2020.

**Materials & Methods:** A total of 126 pregnant women with teenage pregnancies of 13-19 years of age were included. Patients with known medical disorders i.e. PIH, DM were excluded. All teenagers were questioned for demographic particulars like age, parity, ethnicity, antenatal care, qualification, and their height and weight were taken. Clinical details regarding maternal and fetal outcomes of pregnancy were acquired. The data regarding the demographic characteristics of pregnant teenagers and details about fetal and maternal outcomes were documented.

**Results:** In this study, the age span ranges between 13 and 19 years with a mean age of  $17.44 \pm 1.63$  years. A majority of these patients 100 (79.87%) were between the age group of 17 to 19 years. In this study, the frequency of fetomaternal outcome in teenage pregnancy was as follows; anemia was found in 41 (32.54%), miscarriage in 23 (18.25%) patients, and preterm birth in 45 (35.71%) patients.

**Conclusion:** This study concluded that teenage pregnancy is associated with adverse fetomaternal outcomes so it is recommended that public awareness should be arranged on national and regional levels regarding this major public health issue and to avoid teenage marriages.

**Keywords:** Teenage pregnancy, anemia, preterm birth.

## INTRODUCTION

All over the world teenage pregnancy is causing high mortality among fifteen to nineteen years old girls.<sup>1</sup> Child marriages are still going on in Pakistan even though Child Marriage Restraint Act 1929, does not allow females to get married before 16 years and before 18 years for males.<sup>2</sup> Teenage pregnancy not only has poor pregnancy outcome but also affect the future health of the mother and her baby. Adolescent pregnancy is considered as high-risk pregnancy because it affects fetomaternal outcomes adversely and increased mortality and morbidity among them, this challenge has been faced by both developing and developed countries.<sup>3</sup> Adolescent mothers have an increased risk of maternal mortality due to pregnancy-related complications.<sup>4</sup> Adolescent pregnancy is an important problem in developing countries because giving birth in this age group increases maternal mortality among fifteen to nineteen years adolescent girls due to pregnancy-related complications.<sup>5</sup> It has been reckoned that 70,000 adolescent pregnant females succumb to death every year because they are not physically fit for successful motherhood.<sup>6</sup>

Teenage pregnancy has a negative impact on living conditions of both mother (pre-eclampsia, eclampsia, etc) and infants (prematurity, small for gestational age babies, low birth weight, and increase rates of neonatal and infantile morbidity and mortality), so this group is at high-risk group and particular care to fulfill their needs is mandatory.<sup>7,8</sup> Teenage pregnancy is likely an indicator of

maternal risk factor associated with unfavorable birth outcomes.<sup>9</sup>

A study from Nigeria has shown that babies of teenage mothers have a 60% higher mortality rate in the first year of life in comparison to older than nineteen years old mothers.<sup>10</sup> According to a Nepal study pregnancy in the adolescent group is considered as high-risk pregnancy as there is high incidence of preterm birth, anemia, miscarriage and other poor pregnancy outcomes with varying percentages.<sup>11</sup> Pakistan Demographic health survey mentioned that 40% of females in Pakistan marries at the age of 18 years and this population is at increased risk of unfortunate pregnancy issues like, low birth weight infants, small for gestational age, preterm delivery, anemia, chorioamnionitis, and sexually transmitted diseases during pregnancy.<sup>12</sup>

This study is conducted with the purpose to know the incidence of teenage pregnancy and the frequency of its complication in our-setup. Aim of this study was to bring into the knowledge of the health care providers policymakers, planners, caregiver and health managers to look into it and take necessary action to decrease the rate of teenage pregnancy and its related complication by bringing awareness among the general population through different means and to encourage the general population to reconsider the teenage marriages and pregnancy.

## METHODOLOGY

Descriptive, cross-sectional data was collected in the

department of Obstetrics & Gynecology, Civil Hospital Karachi from 4<sup>th</sup> February 2019 to 3<sup>rd</sup> August 2019. The calculated sample size was 126 with 95% confidence level, 5.5% absolute precision, and taking the percentage of preterm birth as 11.1%,<sup>2</sup> Non-probability, consecutive sampling. Teenage women of any parity, singleton pregnancy confirmed by physical examination and ultrasound, and women who gave informed consent were included. Women with the known medical disorder were excluded. Approval was taken from CPSP. Women were selected from the labor room and counselling regarding the study and informed consent were taken from those who met the inclusion criteria. Demographic data like age, parity, ethnicity, education, and antenatal care and their weight and height were obtained from these women. Clinical data regarding the maternal and fetal outcomes of pregnancy in these women was attained. On a structured proforma the attained data concerning the demographic details of the mother and clinical particulars regarding maternal and fetal outcomes were documented.

Statistical inference was done using SPSS version 21.0. Mean and standard deviation were calculated for maternal age and period of gestation. Frequency and percentage were calculated for parity (primiparous/multiparous), socioeconomic status (poor / middle / upper), educational level (illiterate / primary / middle / matric / graduate), booking status (booked/unbooked), anemia, miscarriage, and preterm birth. Effect modifiers like age, gestational age, parity (primiparous/multiparous), socioeconomic status (poor/middle/upper), educational level (illiterate/primary/middle/matric/graduate), and booking status (booked/unbooked) were controlled through stratification and post-stratification chi-square was done to see their effects on the outcome. P-value ≤ 0.05 was considered as significant.

**RESULTS**

In this study age bracket was between 13 and 19 years with a mean age of 17.44 ± 1.63 years. A large percentage of patients 100 (79.87%) were among age group of 17 to 19 years of age as shown in Table I. Average gestational age was 22.21 ± 1.29 weeks. The distribution of patients according to parity was that 96 were primiparous and multiparous. In this study, the frequency of fetomaternal outcome in teenage pregnancy was as follows; anemia was found in 41 (32.54%), miscarriage in 23 (18.25%) patients, and preterm birth in 45 (35.71%) patients as shown in Table II. As regards booking status 52[41.27%] were booked 74 unbooked [58.73]. As regards educational status 12 were uneducated [9.52%],16[12.7%] had primary education,52 [41.27%] had middle education and 46[36.51%] were matric and above. Table III shows fetomaternal outcome of teenage pregnancies.

Stratification of the fetomaternal outcome in relation to age and parity is given in Table IV and V respectively.

Table-I: Age distribution of patients (n=126).

Age (in years)	No. of Patients	Percentage
13-16	26	20.63
17-19	100	79.37
Total	126	100.0

Mean ± SD = 17.44 ± 1.63 years

Table-III: Frequency of feto-maternal complications among teenage pregnant women

Feto-maternal outcome	Frequency (%)	
	yes	no
Anemia	41 (32.54%)	85 (67.46%)
Miscarriage	23 (18.25%)	103 (81.75%)
Preterm birth	45 (35.71%)	81 (64.29%)

TableIV: Stratification of the fetomaternal outcome with respect to age.

		13-16 (n=26)	17-19 (n=100)	P-value
Anemia	Yes	17	24	0.0001
	No	09	76	
Miscarriage	Yes	05	18	0.885
	No	21	82	
Preterm birth	Yes	16	29	0.002
	No	10	71	

Table V: Stratification of the fetomaternal outcome with respect to parity.

		Primiparous (n=96)	Multiparous (n=30)	P-value
Anemia	Yes	35	06	0.093
	No	61	24	
Miscarriage	Yes	18	05	0.797
	No	78	25	
Preterm birth	Yes	36	09	0.454
	No	60	21	

**DISCUSSION**

Teenage pregnancy, also known as adolescent pregnancy, is pregnancy in a female under the age of 20 Age of the mother has a substantial role in the adverse consequences of pregnancy. Adolescent pregnancies have been accepted as high-risk pregnancy for mother and infant both .<sup>13</sup>

Due to malnourishment encountered in young women, these women are vulnerable to multiple risks during pregnancy and labour, that includes hypertensive disorders of pregnancies, anaemia, preterm labour, obstructed labour, maternal mortality, low birthweight and perinatal and neonatal mortality.<sup>14,15</sup> Noticeably different frequency of adolescent pregnancy has been found in developed and underdeveloped countries.

There is a direct correlation between the age of marriage and the age at which the first child is born. The trend of marrying at a young age is more in developing and underdeveloped countries than in first world countries. On average half of the population of young girls get married by the age of 16 years in South Asia, 18 years in Western Asia, 17 years in sub-Saharan Africa, and 19 years in North Africa to above 20 years in Latin America.<sup>16</sup>According to another study countries like Bangladesh, Niger, Yemen, India (16.1) and Senegal have highest number of girls who has married at young age.<sup>17</sup>

A vast number of previous literature has shown a significant relationship between teenage pregnancy and undesirable pregnancy outcomes. Other complications of teenage pregnancy include pre-eclampsia<sup>18</sup> and small for gestational age infants<sup>19</sup>. Fraser AM et al<sup>20</sup> in his study also shows an association between adolescent pregnancy and significant risk of undesirable perinatal outcomes (pre-term delivery, low birth weight ,small for gestational age and neonatal mortality) independent of known confounders of adolescent pregnancy. However, as shown by two previous studies, there is no association between small for gestational age and teenage pregnancies.<sup>21,22</sup>

Another study showed the incidence of teenage pregnancy with a wide range of variation, varying grades of

anaemia, eclampsia, preterm deliveries. Caesarian section rates were as high as well as operative vaginal deliveries, low birth weight neonates were 12.5%, requiring neonatal intensive care admission and perinatal deaths were 2% due to respiratory distress syndrome, prematurity and neonatal sepsis.<sup>23</sup>

The most frequent maternal challenges of adolescent pregnancy in another research were anemia, preterm labour, and pregnancy-induced hypertension. In these pregnancies ,12.82% deliveries resulted in still birth, and 21.57% of neonates were low birth weight.<sup>24</sup>

## CONCLUSION

This study concluded that teenage affect adversely fetomaternal outcome so it is recommended that public awareness should be arranged on national and regional levels regarding this major public health issue and to avoid teenage marriages.

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