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Research Article

THE IMPACT OF TEENAGE PREGNANCY ON MATERNAL AND PERINATAL OUTCOME

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Abstract:

***Aim:** This study aimed to discover fetal results (miscarriage, birth weight, prematurity and childbirth) and pregnancy complications (hypertension, preterm labor, diabetes and anemia) in teenage mothers compared to adult women.*

***Place and Duration:** In the Obstetrics and Gynecology Unit II of Services Hospital Lahore for one year duration from March 2019 to March 2020*

***Methods:** This study is a retrospective comparative study that involved 129 teenage mothers aged 19 and younger, and 740 primitive adult mothers aged 20-29 with fetal and maternal complications.*

***Results:** The frequency of miscarriages was higher in mothers in teenage $p = 0.0016$, $OR = 5.25$, $95\% CI = 1.87-14.74$. The lowest birth weight index was recorded among mothers in adolescence $p = 0.0033$, $OR = 2.1219$, $95\% CI = 1.28-3.48$. A larger percentage of premature babies was recorded among mothers in adolescence $p = 0.0001$, $OR = 3.95$, $95\% CI = 2.16-7.24$. The adolescent group showed a higher incidence of fetal death compared to the adult group with statistically insignificant $p = 0.9$, $OR = 1.15$, $95\% CI = 0.133-9.91$. A higher incidence of hypertensive disorders was found in adult primary mothers $p = 0.45$, $OR = 0.63$, $95\% CI = 1.88-2.1$. The highest percentage of premature deliveries was recorded among mothers in adolescence $p = 0.0001$, $OR = 3.95$, $95\% CI = 2.16-7.24$. DM cases were reported in adult mothers and no similar cases were found in the study group, $p = 0.6939$, $OR = 1.29$, $95\% CI = 0.86-1.94$. A higher incidence of anemia was found in teenage groups $p = 0.2135$, $OR = 1.29$, $95\% CI = 0.86-1.94$.*

***Conclusion:** Our study concluded that teenage pregnancy was associated with a high risk of miscarriage, low birth weight, premature babies and preterm birth. Proper antenatal care, health education and elevation of community awareness might reduce the number of teenage pregnancies and their complications.*

***Key words:** Primigravid mothers, teenage, adults.*

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INTRODUCTION

Pregnancy and childbirth in adolescents are considered risky, and harmful outcomes for young pregnant women include preterm labor, anemia, and pregnancy-related disorders with hypertension. Many health problems have been associated with adverse effects on the fetus, including premature babies, low birth weight babies and miscarriages. Studies on results and complications during puberty have conflicting results. Some of these studies have shown that there is no significant difference between adolescents and pregnant adults with fetal and maternal outcomes, and that there is no additional risk if there is good prenatal care, early booking and family support. Thaithae et al. Pregnancy in adolescents has been found to be associated with an increased risk of adverse effects in mothers and newborns, such as preterm delivery, preeclampsia and low birth weight. Leftwich et al. Harmful effects on the mother, such as preterm labor, anemia, and pregnancy-related disorders with hypertension have been found to be related to pregnancy in adolescents. Poor fetal results include premature babies, low birth weight babies, miscarriages and stillbirths, and are more common in young pregnant women. Watcharaseranee et al. Young pregnancies have been found to be associated with a significantly increased risk of anemia and poor fetal outcome during pregnancy.

PATIENTS AND METHODS:

This study is a retrospective comparative study held in the Obstetrics and Gynecology Unit II of Services Hospital Lahore for one year duration from March 2019 to March 2020. A total of 129 teenage primigravid pregnancies and 740 adult primigravid pregnancies were compared. Case files regarding

pregnancy, prenatal care, vaginal delivery, CS or other instrumental deliveries (vacuum extraction), adolescents aged 19-29 and adult women aged 20-29 were collected and analyzed. Complications that occur during pregnancy in the maternity hospital. The results of the fetus (miscarriage, stillbirth, premature births and birth weight) and complications during pregnancy (hypertension disorders, diabetes, preterm delivery and anemia) were compared with adults. Data were analyzed using SPSS version 18.0. The chi-square test, single frequency and 95% confidence interval were calculated. A p value below 0.05 was considered statistically significant. Descriptive results are expressed as frequency and percentage.

The proposal for this study was presented and approved by the Medical Research Ethics Committee. The maternity hospital administration received permission to collect data from medical records.

RESULTS:

Table 1 shows the risk associated with spontaneous miscarriage and statistically significant $p = 0.0016$, OR = 5.25, 95% CI = 1.87-14.74 in adolescents. This table also shows the risk of low birth weight in the higher adolescent group than in the adult group with $p = 0.0033$, OR = 2.1219, 95% CI = 1.28-3.48. This table statistically shows the percentage of premature babies in the adolescent group with $p = 0.0001$, OR = 3.95, 95% CI = 2.16-7.24 compared to the adult group. This table shows a higher incidence of fetal deaths in the adolescents group compared to adults with a statistically insignificant difference $p = 0.9$, OR = 1.15, 95% CI = 0.133-9.91 (Fig. 1).

Table 1 Fetal outcome among maternal age groups

Variable	Teenage primigravid mothers (n=129)	Adult primigravid mothers (n=740)	OR (95% CI)	p-value
	N	N		
Miscarriage	7	8	5.25 (1.87-14.74)	0.0016
Low birth weight	24	82	2.11 (1.28-3.48)	0.0033
Premature babies	19	31	3.95 (2.16-7.24)	0.0001
Stillbirth	1	5	1.15 (0.13-9.91)	0.9000

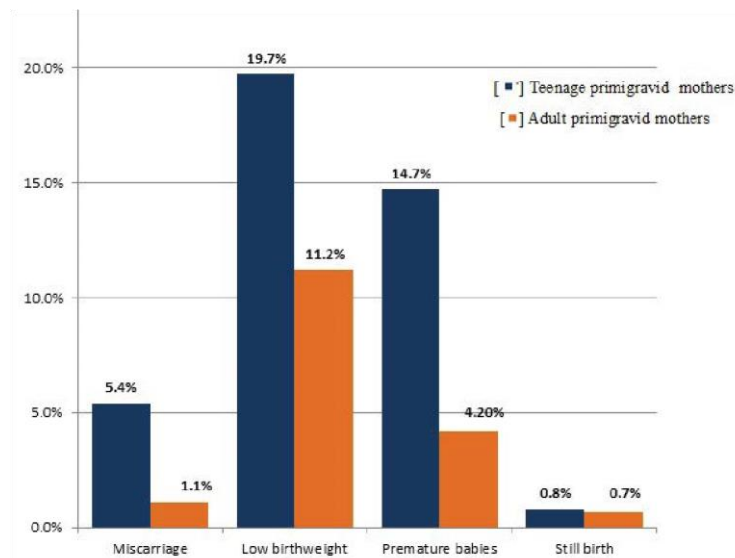


Figure 1 Comparison of fetal outcomes between the maternal age groups

Table 2 shows the incidence of hypertensive disorders among primary adult mothers, with the statistically insignificant difference being greater than in the study group $p = 0.4514$, OR = 0.63, 95% CI = 1.88-2.10. This table also has a higher risk of premature delivery in the adolescent group compared to the adolescent group with $p = 0.0001$, OR = 3.95, 95% CI = 2.16-7.24. In this table there was only one case of DM among adult mothers and no similar case in the study group $p = 0.6939$, OR = 1.29, 95% CI = 0.86-1.94. This table shows a higher incidence of anemia in the adolescent group compared to the adult group with a statistically insignificant difference $p = 0.2135$, OR = 1.29, 95% CI = 0.86-1.94 (Fig. 2).

Table 2 Distribution of maternal complications in the two age groups

Variable	Teenage primigravid mothers (n=129)	Adult primigravid mothers (n=740)	OR (95%CI)	p-value
	N	N		
Hypertensive disorders	3	27	0.63 (0.188-2.10)	0.4514
Preterm birth	19	31	3.95 (2.16-7.24)	0.0001
Diabetes mellitus	0	1	1.29 (0.86-1.94)	0.6939
Anemia	41	196	1.9 (0.08-46.98)	0.2135

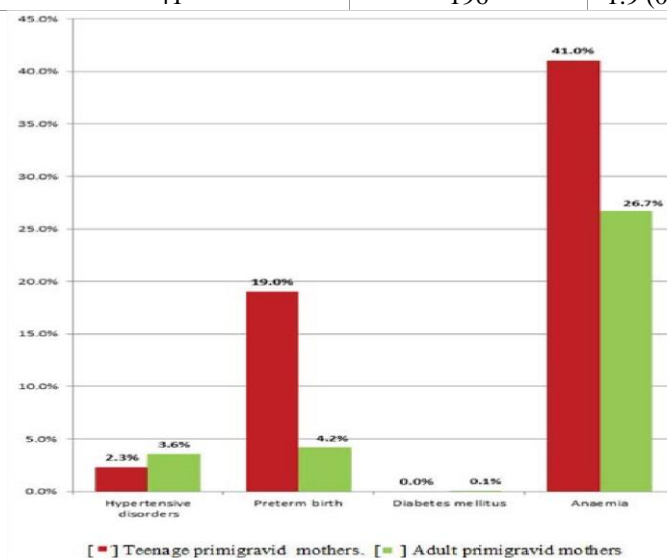


Figure 2 Comparison of maternal complications between two age groups

DISCUSSION:

This study includes 869 first-born mothers, 129 of whom were 18.23 years old on average, 19 years old on average, and a young first-born mother at least 14 years old (study group). The adult premium group (comparative group) includes 740 cases between 20 and 29 years old, with an average age of 24.37 years and an average age of 24 years. In this study, for the first time, the incidence of miscarriages among adolescent mothers was higher than for adult mothers. This result is consistent with the results of previous studies of adolescent mothers. The study involved 869 first-born mothers, including 129 young for the first time (study group) aged 18.23, the average age is 19 years, and the minimum age is 14 years. The adult premium group (comparative group) includes 740 cases between 20 and 29 years old, with an average age of 24.37 and an average age of 24 years. In this study, for the first time, the incidence of miscarriages among adolescent mothers was higher than for adult mothers for the first time. This result is consistent with the results of previous studies, which found that mothers of adolescence had a higher incidence of miscarriages than for adult first-born mothers (Fig. 1). Our findings contradict the results of some previous studies that showed no difference in fetal outcomes between mothers in adolescence and mothers in adulthood.

In this study, the percentage of children with a low birth weight was higher among adolescent primitive mothers than adult primary mothers. Our findings confirm the results of earlier studies that found that adolescent mothers had a higher percentage of children with low birth weight compared with adult first-born mothers (Fig. 1). Our findings are not consistent with the results of some previous studies that did not differ in the results of newborns of adolescent mothers and adults. In this study, the percentage of premature babies among young mothers is higher than among adult mothers. This result confirms the findings of previous studies in which adolescent mothers had more premature babies than adult first-born mothers (Fig. 1). Our findings contradict the results of some previous studies that did not differ significantly in fetal outcomes between adolescents and adult mothers. In our study, the incidence of stillbirth among mature mothers was higher than in adult primitive mothers. This result is consistent with the findings of previous studies, which found more frequent cases of stillbirth among adolescent mothers (Fig. 1). Our findings contradict the results of some previous studies showing the lowest rate of stillbirth among young mothers. Our results are consistent with the results of previous studies, which did not differ significantly in the percentage of hypertensive disorders between adolescents and adult mothers, and the results of this study were published by Liu

et al. higher incidence of hypertensive disorders compared to adult mothers. In our study, the percentage of premature births among adult mothers was higher than in adults. Our findings confirm the results of previous studies that found that adolescent mothers had a premature birth rate earlier than adult primitive mothers, and denied the results of studies that showed no significant difference in the incidence of labor. premature births between young and adult mothers. (Figure 2). In our study, no cases of gestational diabetes were found in mothers in adolescence. This result contradicts the results of the study, which found that the risk of gestational diabetes increases with older mother's age and confirms the findings from previous studies, while gestational diabetes is more common in young mothers. The results of this study are consistent with those that show a higher incidence of anemia among young mothers, and contradict the results of the study, which show a low incidence of anemia among young mothers (Fig. 2).

CONCLUSION:

Our study found that teenage pregnancy is associated with high miscarriage, low birth weight, prematurity and the risk of premature delivery. Prenatal care, health education and increased public awareness can lead to a reduction in the number of young pregnancies and complications.

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