



“A CLINICAL STUDY OF TEENAGE PREGNANCY WITH SPECIFIC REFERENCE TO FETO MATERNAL OUTCOME”

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ABSTRACT

Background:

“Teenage Pregnancy is a global public concern with profound implications for both maternal and infant health, socioeconomic development, and overall well-being. While adolescent pregnancy rates have declined in many developed countries due to improved access and awareness regarding contraception and comprehensive sex education, teenage pregnancies remain prevalent in developing and under-developed, where cultural, economic, structural factors contribute to drive early childbearing” (UNESCO, 2018) ^[1]. The consequences of teenage fertility extend beyond the immediate risks associated with pregnancy and childbirth, affecting long-term maternal and child health outcomes, educational attainment, and economic stability [WHO], 2004) ^[2].

Aim and Objective:

The present study topic is — “A CLINICAL STUDY OF TEENAGE PREGNANCY WITH SPECIFIC REFERENCE TO FETO MATERNAL OUTCOME” with following:

- 1.To find out the prevalence of teenage pregnancy and its maternal and neonatal outcome.
- 2.To estimate the prevalence of teenage pregnancy in a tertiary care centre
- 3.To determine the maternal outcome of teenage pregnancy in a tertiary care centre

Methods:

The study was conducted among 120 teenage pregnancies who visited Maternal and Child Health

Building of Jorhat Medical College Department of Obstetrics and Gynecology, for a period of one year with a provisional diagnosis of Teenage pregnancy. Inclusion criteria Pregnancy below 18 years of age who are present at the time of data collection and willing to participate in the study. Exclusion criteria. Pregnancy below 28 weeks of gestation

Results:

The majority of participants (63.3%) were 18 years old, representing the predominant age group. Most had education up to the 7th grade. Among maternal complications, pre-eclampsia (22.5%), preterm labor (28.3%), eclampsia (5%), and abruption (4.1%) were most frequently observed. Caesarean deliveries were mainly indicated for cephalopelvic disproportion (25.0%), fetal distress (16.2%), malpresentation (17.7%), and failed induction (7.3%). In terms of neonatal outcomes, 10.3% of infants weighed <2 kg, 21.4% weighed 2–2.4 kg, 53.1% weighed 2.5–3 kg, and 15.1% weighed >3 kg. NICU admissions were required for low birth weight (14%), prematurity (10.8%), and birth asphyxia (4.1%), with an average hospital stay of seven days. Early neonatal death occurred in 1.6% of cases.

Conclusion: In conclusion, teenage fertility is a multifaceted issue with far-reaching consequences for maternal and child health, education, and socio-economic development. While biological factors may heighten certain health risks, disparities in healthcare access and quality of care are equally influential. Addressing adolescent pregnancy effectively requires a holistic approach—encompassing comprehensive sexuality education, expanded access to contraception, and supportive social and policy frameworks that empower young women. By investing in evidence-based interventions and ensuring equitable access to healthcare and education, societies can significantly reduce the prevalence of teenage pregnancies and foster healthier, more sustainable futures for adolescent mothers and their children.

Introduction:

Teenage pregnancy remains a global public health concern with significant implications for maternal and child health, education, and socioeconomic development. While rates have declined in developed nations due to improved sex education and contraceptive access, they remain high in developing regions where poverty, limited healthcare, and cultural norms drive early childbearing. Adolescent mothers face increased risks of preterm birth, low birth weight, and maternal complications, largely due to inadequate healthcare rather than age alone. Teenage pregnancy also contributes to poor infant outcomes, reduced educational attainment, and a cycle of poverty. Evidence shows that quality maternity care and comprehensive sexuality education can improve outcomes and reduce adolescent pregnancies. Effective interventions include education, access to contraception, and community involvement. Addressing structural barriers such as gender inequality and limited healthcare is essential to promote healthier futures for teenage mothers and their children.

Need for the Study:

Studying the feto-maternal outcomes of teenage pregnancy is crucial for understanding its impact on both maternal and neonatal health. Teenage mothers are biologically, socially, and economically vulnerable, which places them at higher risk for complications such as preterm birth, low birth weight, preeclampsia, anemia, and perinatal mortality. These outcomes not only endanger maternal health but also contribute to poor neonatal survival and long-term developmental challenges for the child. Furthermore, adolescent pregnancies often occur in contexts of poverty, limited education, and inadequate access to quality healthcare, which exacerbate health disparities. By systematically studying these outcomes, healthcare professionals and policymakers can identify the specific risk factors influencing adverse results and develop targeted interventions to improve maternal and infant care. Such research also supports the formulation of evidence-based strategies—such as enhanced prenatal care, sexual education, and contraceptive access—to reduce teenage pregnancies and improve the quality of life for young mothers and their children

Materials and methods:

The study was conducted among 120 teenage pregnancies who visited Maternal and Child Health Building of Jorhat Medical College Department of Obstetrics and Gynecology, Jorhat medical college and hospital for one year with a provisional diagnosis of Teenage pregnancy. Inclusion criteria: Pregnancy below 18 years of age who are present at the time of data collection and willing to participate in the study. Exclusion criteria: Pregnancy below 28 weeks of gestation. Majority (68.3%) were 18 years old, making this the predominant age group.

RESULTS:

TABLE 1: AGE DISTRIBUTION OF STUDY GROUP

AGE	NUMBER	PERCENTAGE
15 YEARS	2	1.66%
16 YEARS	4	3.33%
17 YEARS	63	52.5%
18 YEARS	51	42.5%
TOTAL	120	100%

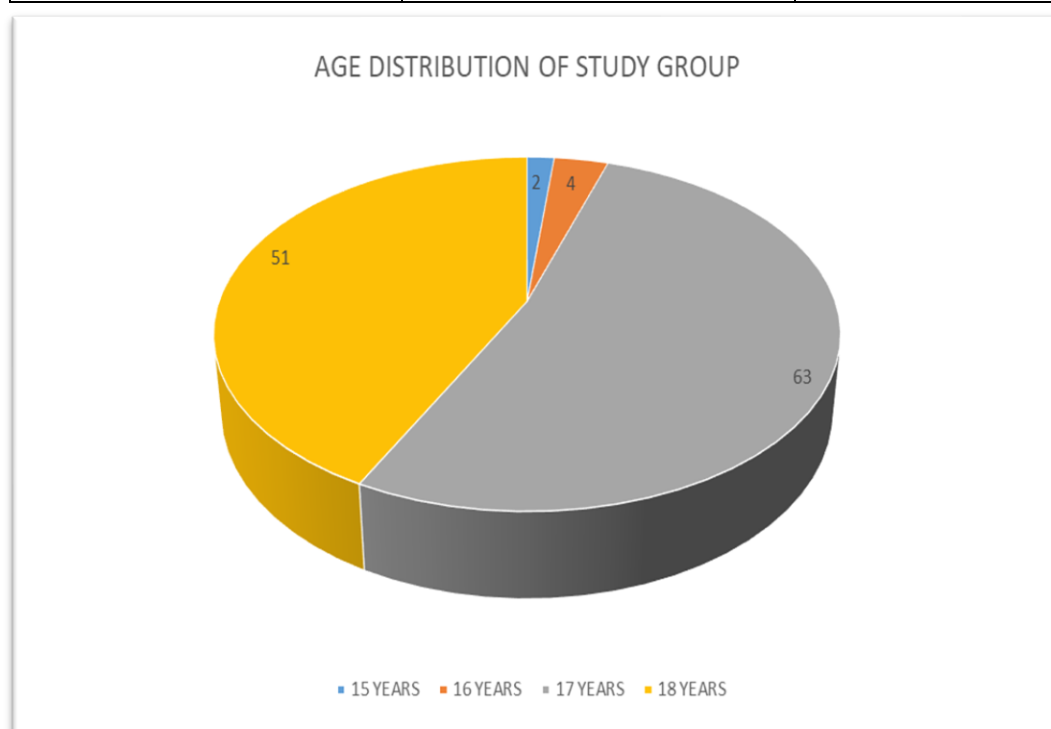


Figure 1-Age distribution

TABLE 2: GRAVIDA-PARITY

PARITY	NUMBER	PERCENTAGE
PRIMIGRAVIDA	119	99.16%
GRAVIDA II	1	0.83%
TOTAL	120	100%

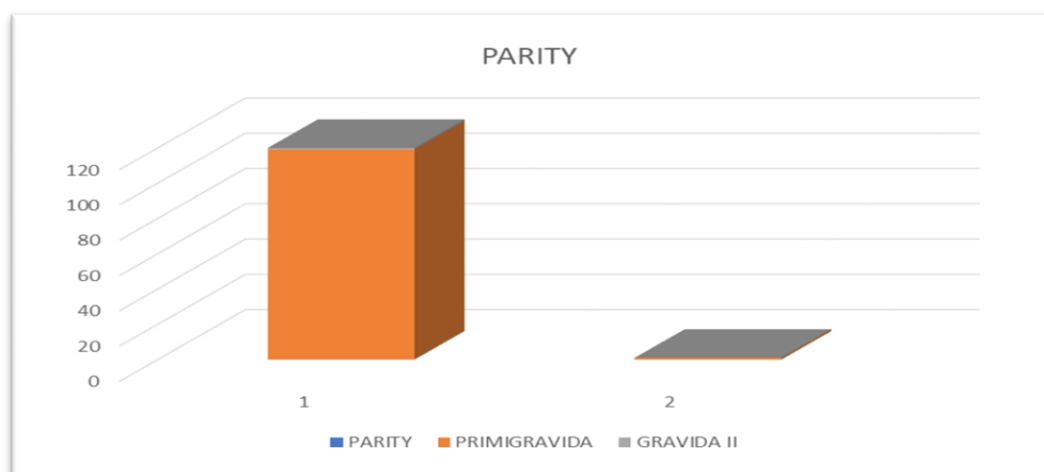


Figure 2-Gravida and Parity

Majority were primigravida, with 119 out of 120 individuals (99.16%) falling into this category, it indicates that first-time pregnancies are the predominant participants in the study

TABLE 3: MARRIAGE AND CONCEPTION INTERVAL

MARRIAGE DURATION	NUMBER OF PREGNANT TEENAGERS	PERCENTAGE
LESS THEN 6 MONTHS	41	34.16%
LESS THEN 1 YEAR	45	37.5%
MORE THEN ONE YEAR BUT LESS THEN 1.5 YEARS	25	20.83%
MORE THEN 1.5 YEARS	8	6.66%
2 YEARS	1	0.83%
	120	100%

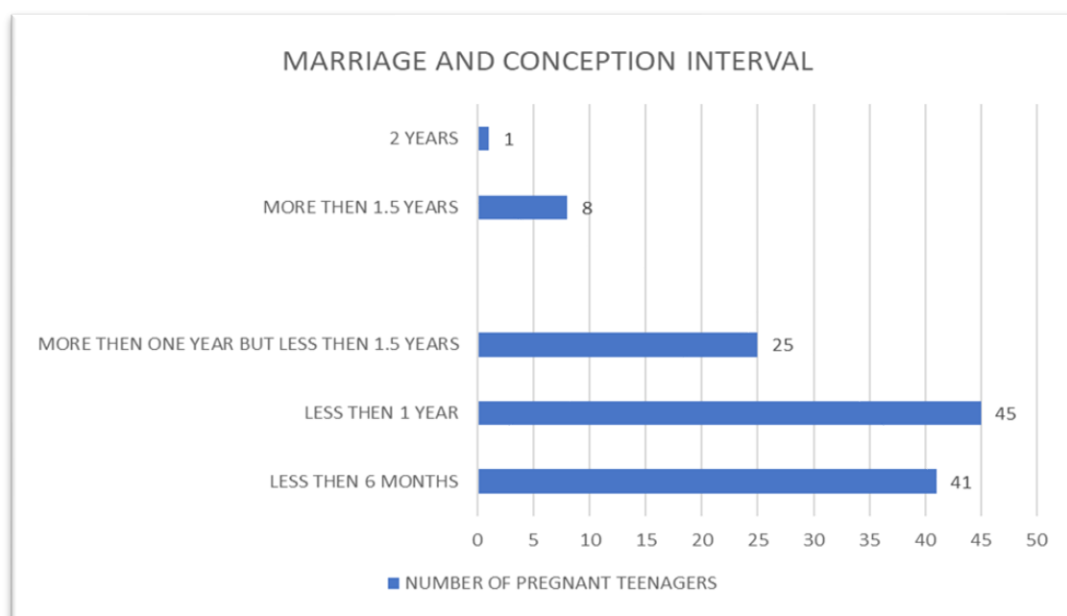


Figure 3 -Marriage and conception interval

A significant proportion, 37.5% (45 individuals), conceived in less than one year of pregnancy interval. 34.16% (41 individuals) have been married for less than six months, before conception, suggesting that a substantial portion of pregnant teenagers experience relatively short durations of

marriage before becoming pregnant. The percentages decrease for those with longer marriage durations: only 6.66% .

TABLE 4: ANTENATAL VISITS

VISITS	PREGNANT FEMALES	PERCENTAGE
0	24	20%
1	88	73.33%
2	8	6.66%
TOTAL	120	100%

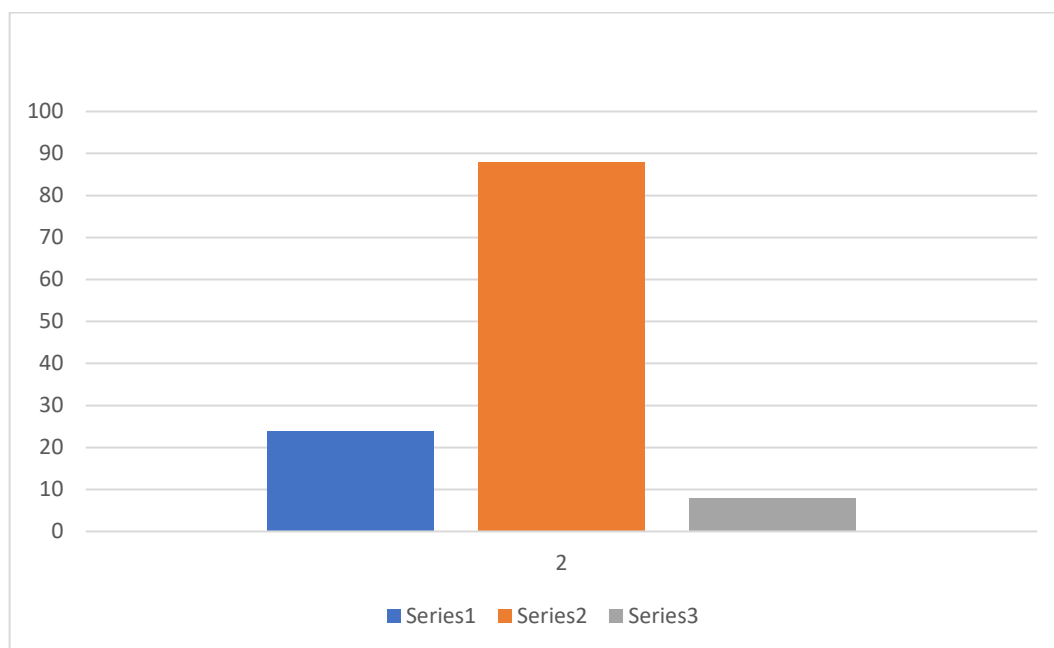


Figure 4 -Number of Antenatal Visits

A significant majority, 73.33% (88 individuals), reported making only one visit, indicating that many pregnant women did not seek frequent prenatal care. Twenty percent (24 individuals) reported no visits at all. Only a small percentage, 6.66% (8 individuals), made two visits.

TABLE 5:MATERNAL COMPLICATIONS

COMPLICATION	NUMBER	PERCENTAGE
ANEMIA	38	31.66%
PRE-ECLAMPSIA	22	18.33%
ECLAMPSIA	15	12.5%
ABRUPTION	11	9.16%
PRE-TERM LABOUR	46	38.33%
MALPRESENTATION	16	13.33%
IUD/STILL BIRTH	8	6.66%
PROM/PPROM	8	6.66%

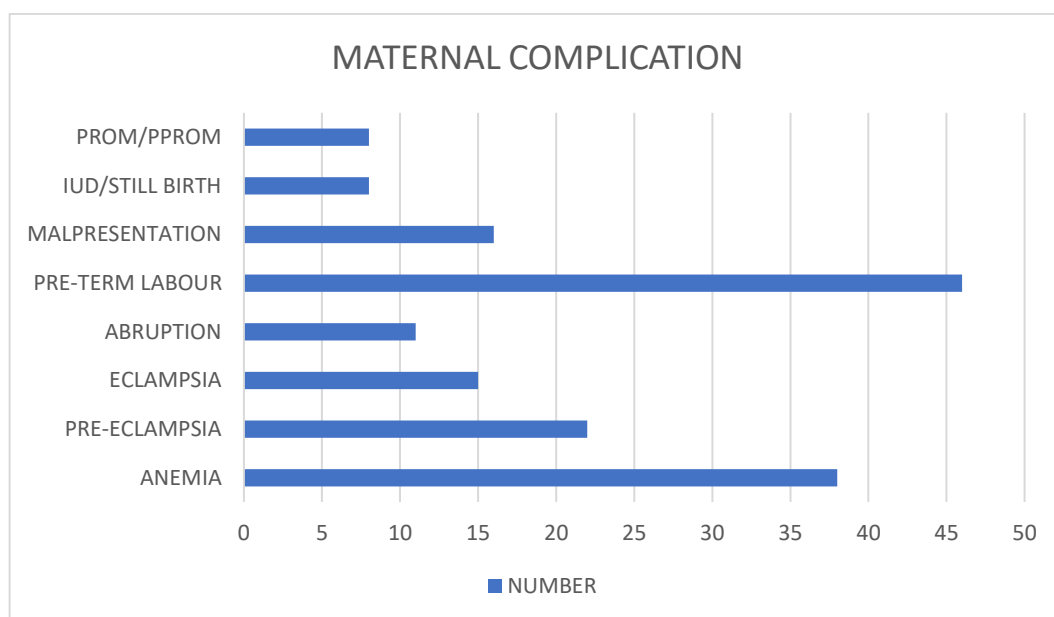


Figure 5--Maternal Complications during pregnancy

- The most common complication was pre-term labour, affecting 38.33% (46 individuals),
- Anaemia followed closely, affecting 31.66% (38 individuals), which was a significant concern as it can lead to fatigue, low birth weight, and other complications for both the mother and the baby.
- Pre-eclampsia and eclampsia were also prevalent, affecting 18.33% (22 individuals) and 12.5% (15 individuals), respectively. These hypertensive disorders are critical conditions that require careful management to prevent severe outcomes, including maternal and fetal health risks.
- Abruptions (91.66%) and malpresentation (13.33%) further highlighted the range of pregnancy complications, while stillbirth and premature rupture of membranes (PROM/PPROM) each affected 6.66% (8 individuals).

TABLE 6: ANEMIA IN TEENAGE PREGNANCY

ANEMIA	NUMBER	PERCENTAGE
PRESENT	38	31.66%
ABSENT	82	68.33%

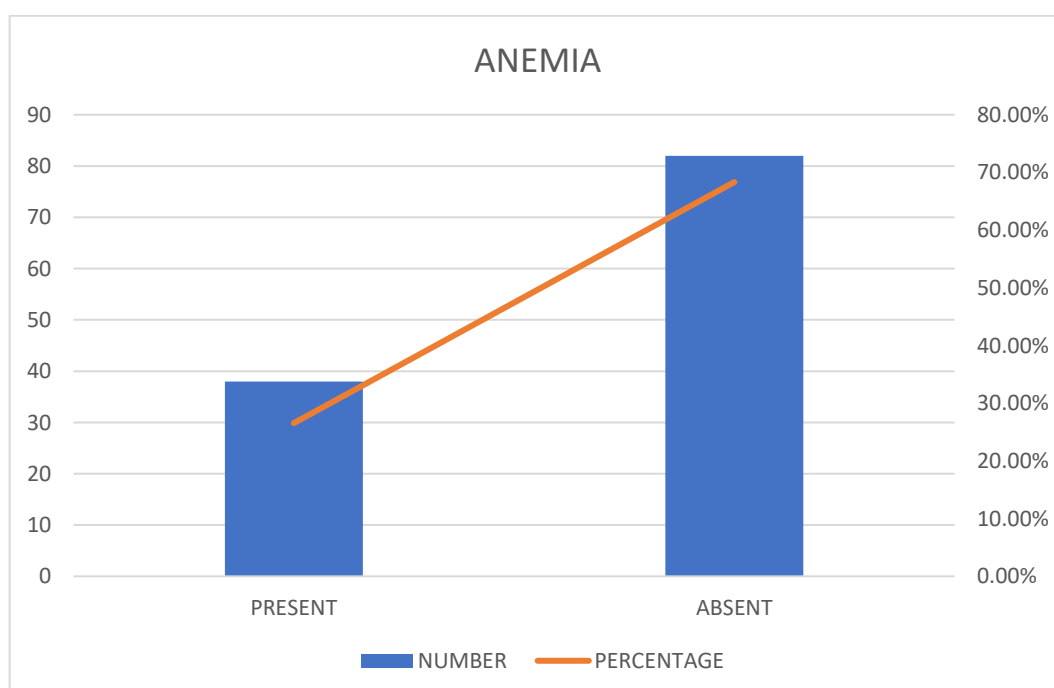


Figure 6--Prevalence of anemia amongst teenage pregnancies

Anaemia affected 31.66% (38 individuals) of pregnant respondents, leading to complications like fatigue and preterm labour. In contrast, 68.33% (82 individuals) were not affected by anaemia.

TABLE 7 : GRADE OF ANEMIA

GRADING	NUMBER	PERCENTAGE
MILD	21	17.5%
MODERATE	9	7.5%
SEVERE	8	6.66%
TOTAL	38	31.66%

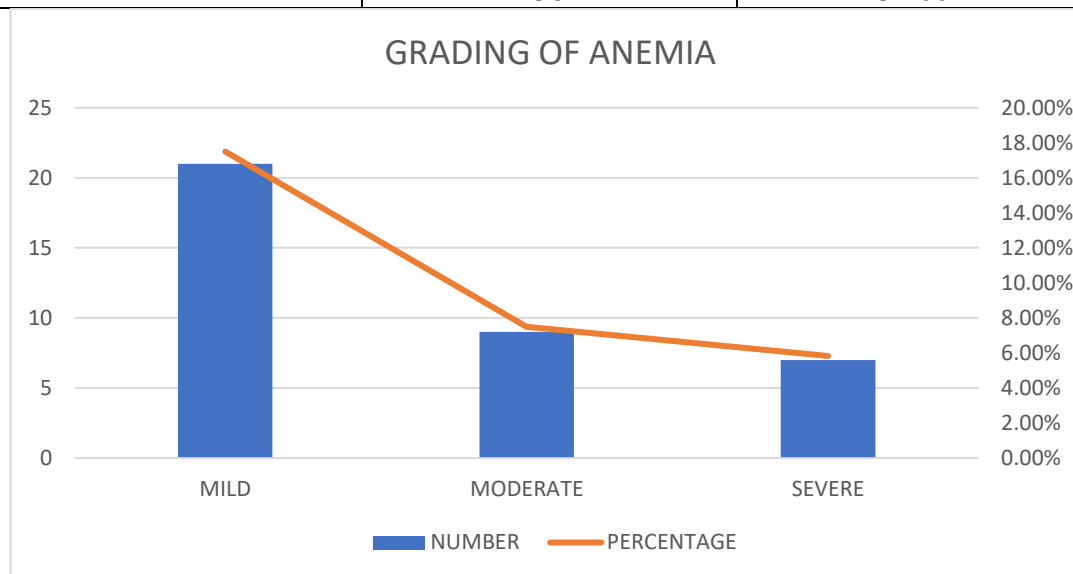


Figure7- Grading of anemia

17.5% (21 individuals) had mild anemia, 7.5% (9 individuals) had moderate anemia, and 6.66% (8 individuals) experienced severe anemia. A total of 31.66% (38 individuals) of the sample were affected by anaemia

TABLE 8: MODE OF DELIVERY

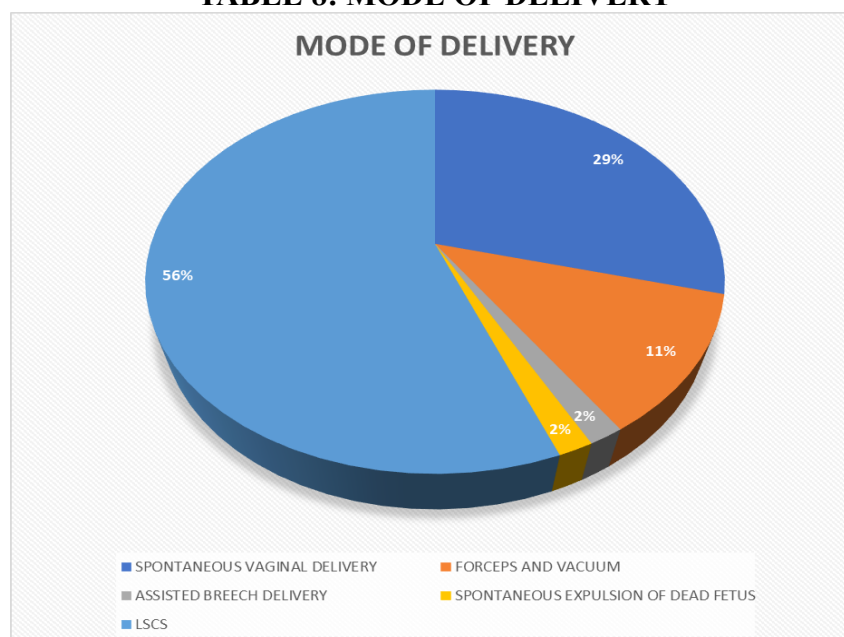


Figure 8-Mode of delivery amongst teenage pregnancies

MODE OF DELIVERY	NUMBER	PERCENTAGE
SPONTANEOUS VAGINAL DELIVERY	35	29.16%
FORCEPS AND VACUUM	14	11.66%
ASSISTED BREECH DELIVERY	2	1.66%
SPONTANEOUS EXPULSION OF DEAD FETUS	2	1.66%
LSCS	67	55.83%
TOTAL	120	100%

Majority of pregnancies (55.83%, or 67 individuals) resulted in a cesarean section (LSCS). Spontaneous vaginal delivery was the second most common, 29.16% (35 individuals). Assisted deliveries, were less frequent, comprising 11.66% (14 individuals) of the study population. These were two cases (1.66%) each assisted breech delivery and spontaneous expulsion of dead fetus.

TABLE 9:INDICATION FOR LSCS

INDICATION	NUMBER	PERCENTAGE
CEPHALO-PELVIC DISPORPORTION	22	18.33%
FOETAL DISTRESS	25	20.88%
MALPESENTATION	16	13.33%
FAILED INDUCTION	3	2.5%
FAILED ACCELERATION	2	1.6%
ABRUPTION	3	2.5%
PRE-ECLAMPSIA	5	4.1%
ECLAMPSIA	10	8.33%

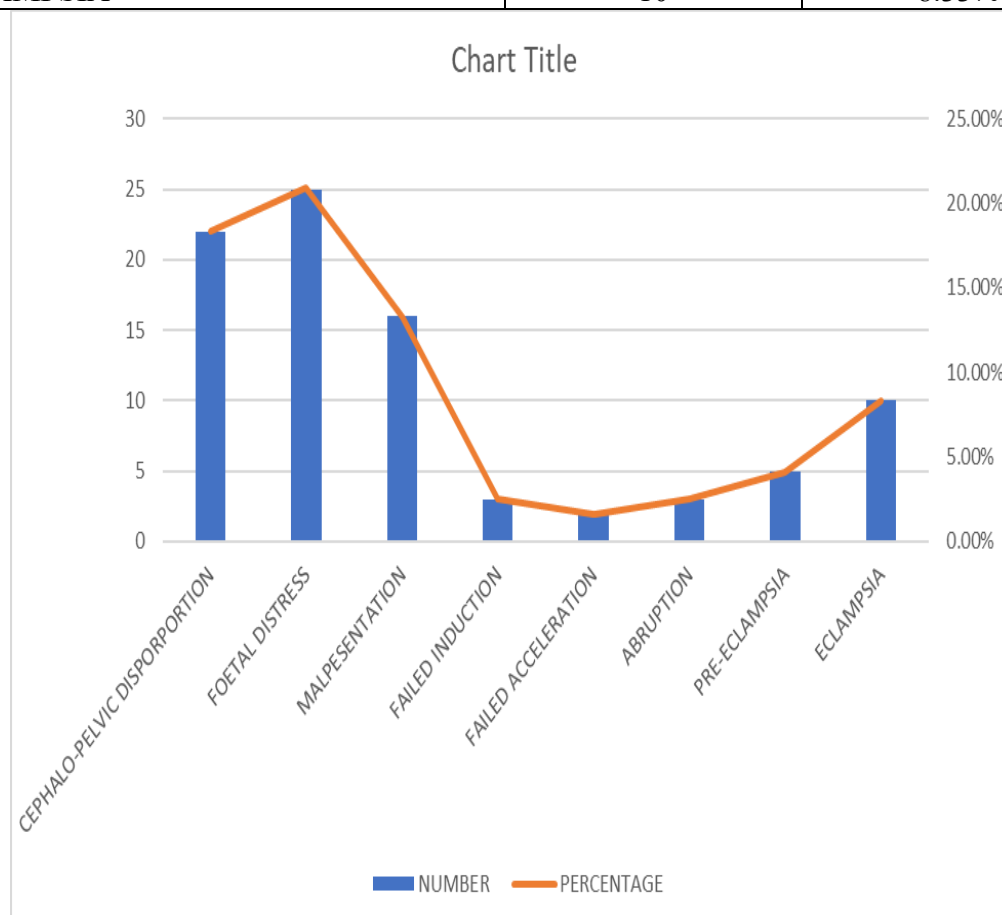


Figure 9-Indications of LSCS amongst teenage pregnancies

The most common indication was fetal distress, affecting 20.88% (25 individuals), followed by cephalo-pelvic disproportion at 18.33% (22 individuals) & malpresentation (13.33%, 16 individuals). Other reasons include pre-eclampsia (4.1%, 5 individuals), eclampsia (8.33%, 10 individuals), and failed induction (2.5%, 3 individuals). Abruptions and failed acceleration each accounted for 2.5% (3 individuals and 2 individuals, respectively).

TABLE 10: BIRTH WEIGHT OF INFANTS

WEIGHT	NUMBER OF INFANTS	PERCENTAGE
<2kg	12	10%
2-2.4kg	17	14.16%
2.5-3kg	60	50%
>3kg	31	25.83%
TOTAL	120	100%

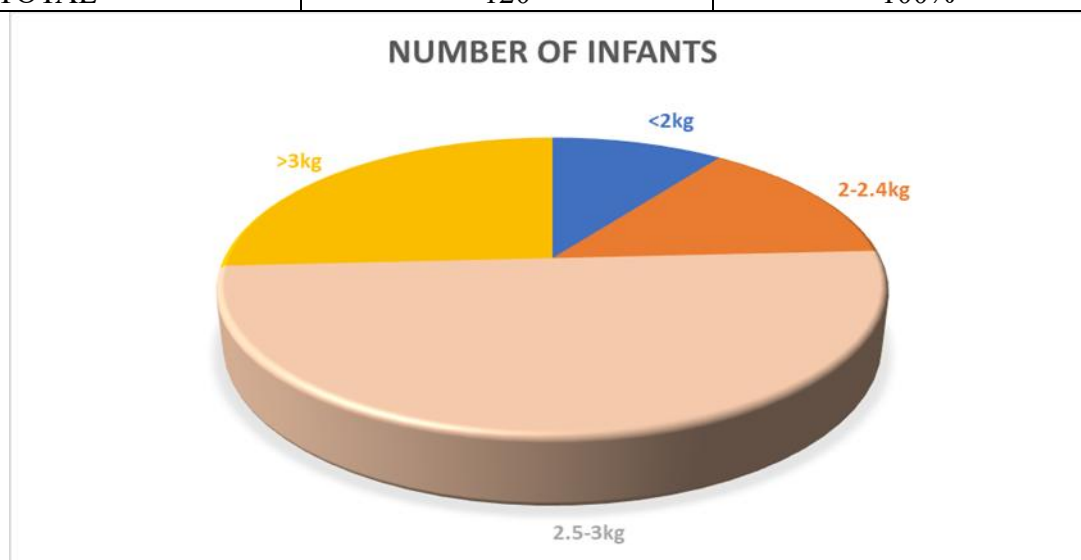


Figure 10: Birth weight of Infant of Teenage mothers

Significant portion of infants fall within the 2.5-3kg range, comprising 50% (60 infants) of the total newborns. The next largest group was newborns weighing over 3kg, accounted for 25.83% (31 infants) of the total newborns. Newborns weighing between 2-2.4kg made up 14.16% (17 infants), while 12 newborns (10%) weigh less than 2kg, indicating a higher risk for low birth weight.

TABLE 11: NEONATAL OUTCOME

OUTCOME	NEONATAL OUTCOME	PERCENTAGE
PREMATURITY	26	21.66%
LBW	2	1.66%
BIRTH-ASPHYXIA	14	11.66%
EARLY NEONATAL DEATH	6	5%
IUGR	1	0.833%
NORMAL	71	60%

NICU ADMISSION	INFANTS	PERCENTAGE
YES	40	33.33%
NO	80	66.66%
TOTAL	120	100%

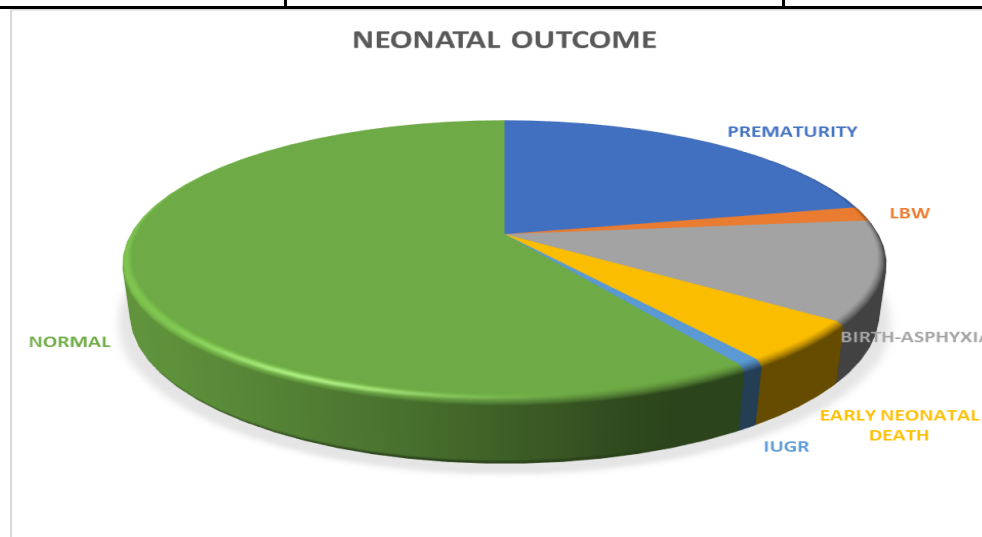
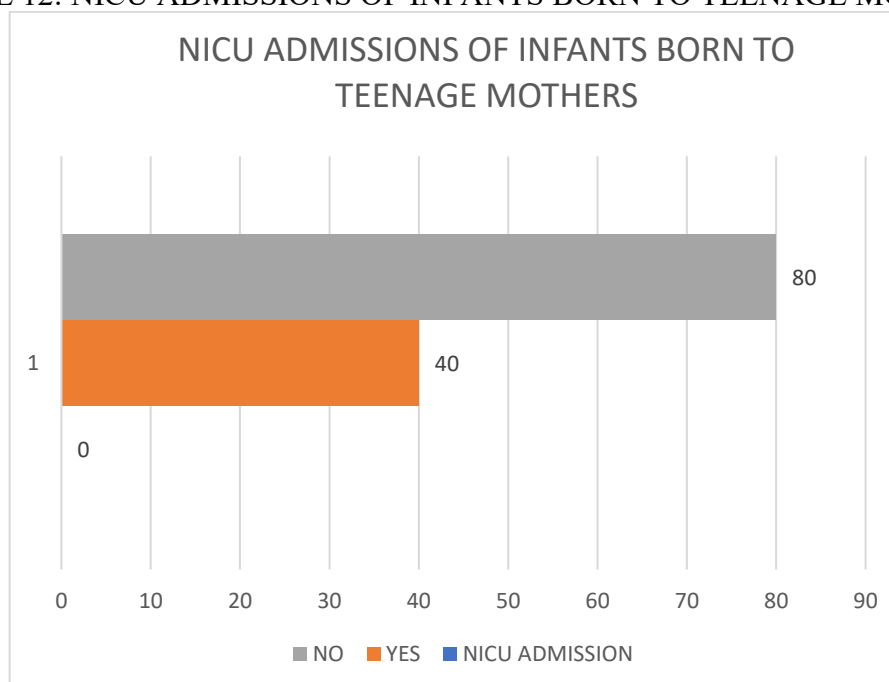


Figure 11-Neonatal outcome

The neonatal outcome data showed that 60% (71 infants) had normal outcomes. However, 21.66% (26 infants) were premature, which poses a higher risk of complications such as respiratory and developmental issues. Birth asphyxia affected 11.66% (14 infants), a serious condition requiring immediate medical attention. Low birth weight (LBW) was seen in 1.66% (2 infants). Early neonatal death occurred in 5% (6 infants). Intrauterine growth restriction (IUGR) affected 0.83% (1 infant).

TABLE 12: NICU ADMISSIONS OF INFANTS BORN TO TEENAGE MOTHERS



Conclusion

In conclusion, teenage pregnancy remains a major global public health issue with significant implications for both maternal and child health, education, and socioeconomic development. The biological immaturity of adolescent mothers, combined with inadequate access to quality prenatal and perinatal care, contributes to higher risks of complications such as preterm delivery, low birth weight, and perinatal mortality. However, research shows that with proper healthcare and support, teenage mothers can experience outcomes comparable to older mothers. Beyond health risks, early childbearing perpetuates cycles of poverty, limits educational attainment, and increases vulnerability to social stigma, mental health challenges, and economic dependence. Addressing these multifaceted consequences requires a comprehensive and collaborative approach that includes sexuality education, accessible reproductive healthcare, and supportive social policies. Empowering adolescents through education, gender equality, and community-based interventions is essential to reduce early pregnancies. Investing in evidence-based programs and equitable healthcare access will not only lower teenage pregnancy rates but also enhance the well-being and future opportunities of young mothers and their children, ultimately contributing to broader social and economic development.

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