Feto-maternal Outcomes in Adolescent and Young Adult Primigravid Mothers

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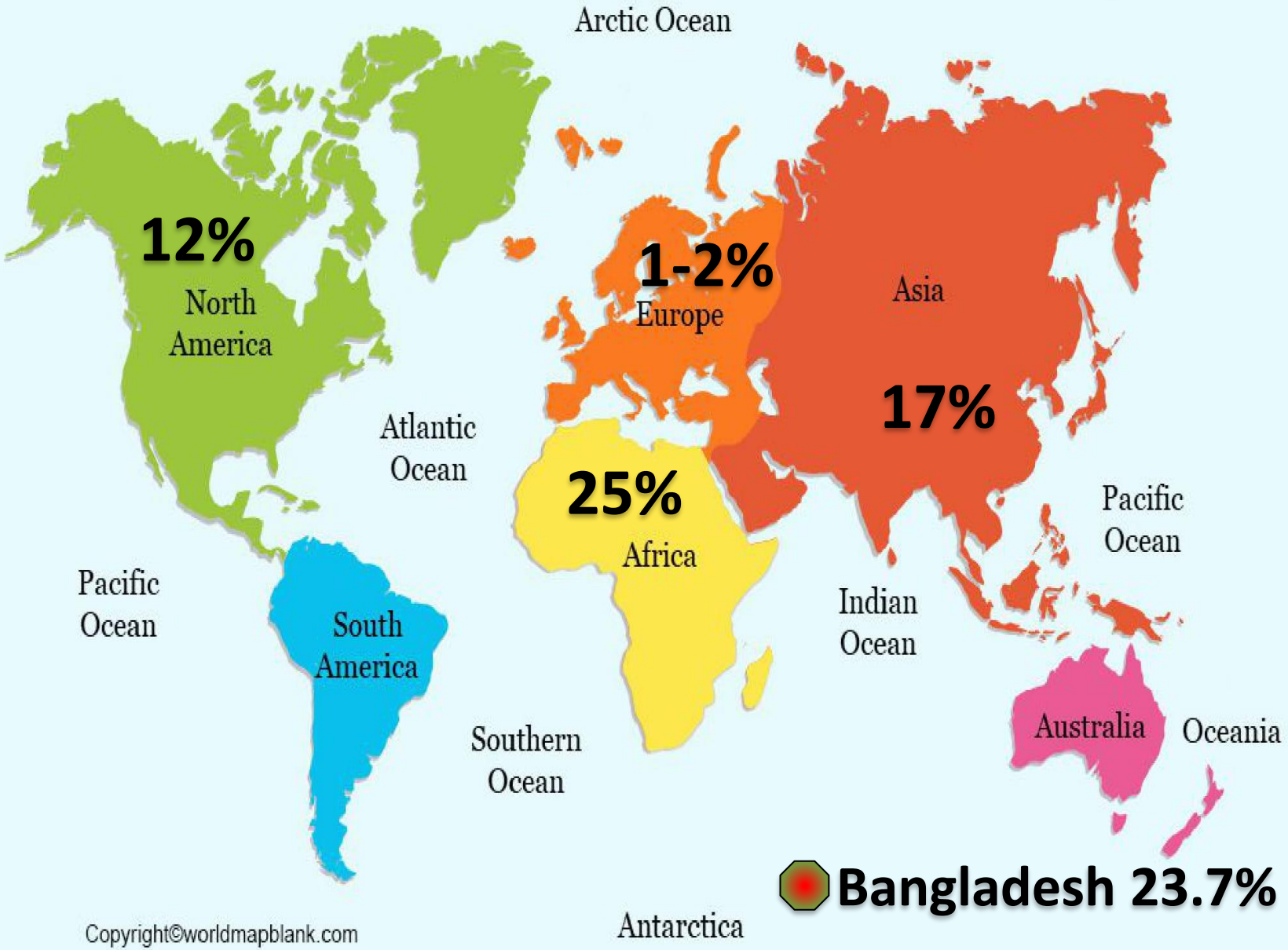
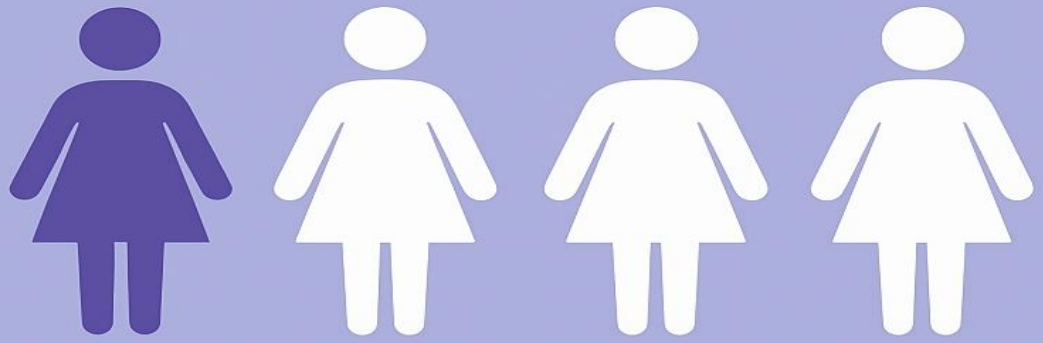
Adolescent pregnancy

- Adolescent pregnancy refers to **pregnancy occurring in girls aged 10–19 years**, as defined by the **World Health Organization (WHO)**.
- It is typically categorized into two subgroups:
  - **Early adolescence:** 10–14 years
  - **Late adolescence:** 15–19 years

Prevalence of Adolescent Pregnency: 13% globally



Bangladesh Context



1 in 4 births occur among adolescent girls

(BDHS 2022)

Bangladesh Context

- 50% of girls married by age 18 (BDHS 2022)
- Median age of marriage: 15.8 years
- 66% of women have their first child before turning 18
- Approximately 75% of these pregnancies are planned (BBS 2023).

Causes of adolescent pregnancy

- Early marriage & social pressure to conceive
- Poverty & low education
- Lack of sexual & reproductive health education

Causes of adolescent pregnancy

Gender inequality & weak decision-making power

Cultural & religious norms promote early motherhood

Limited access to contraceptives & reproductive health services

TEENAGE PREGNANCY

EFFECTS & RISKS

EDUCATION INTERRUPTED

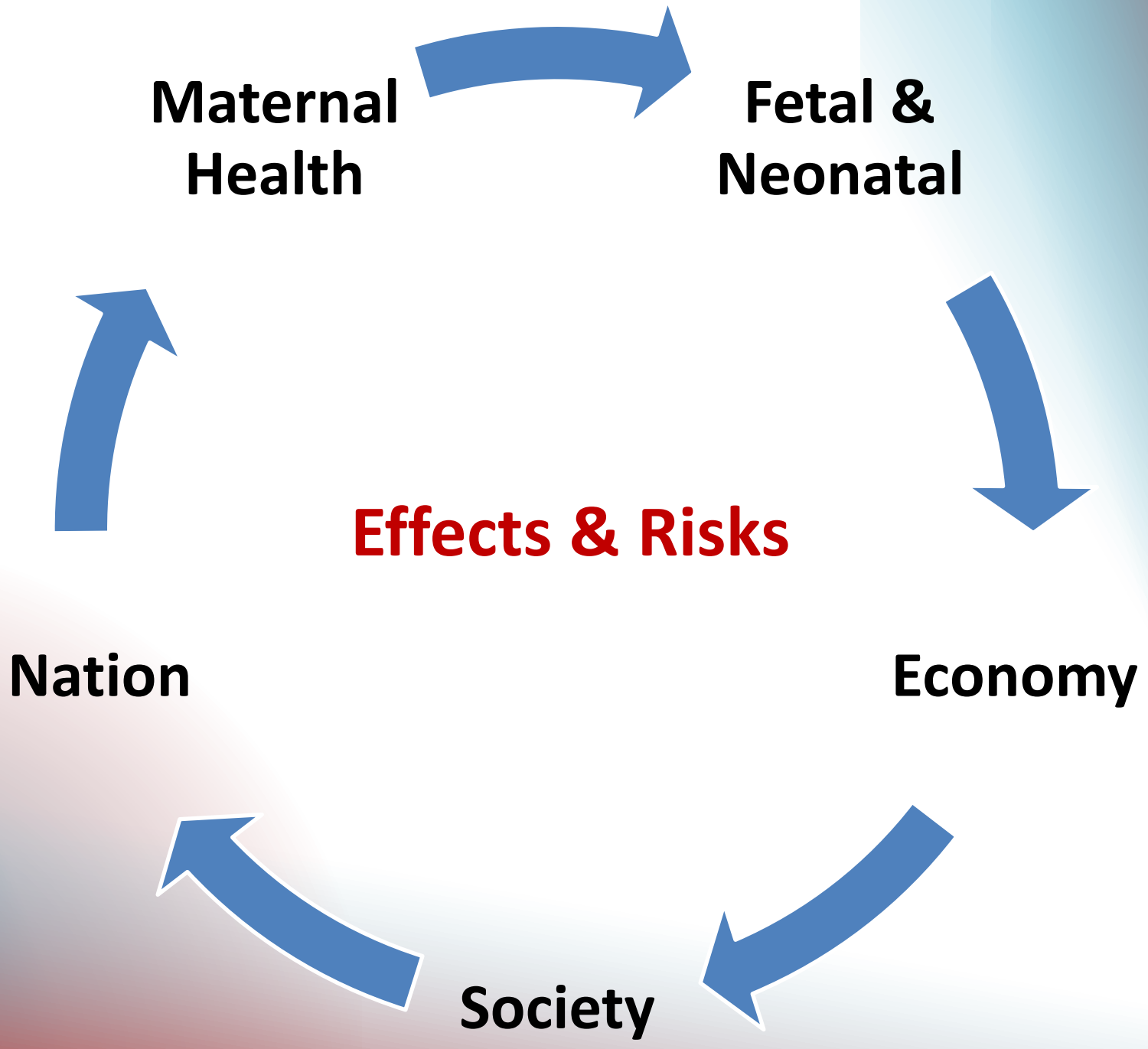
HEALTH RISKS

E.G. OBSTETRIC FISTULA

MATERNAL MORTALITY

PREMATURE BIRTH

STILLBIRTH

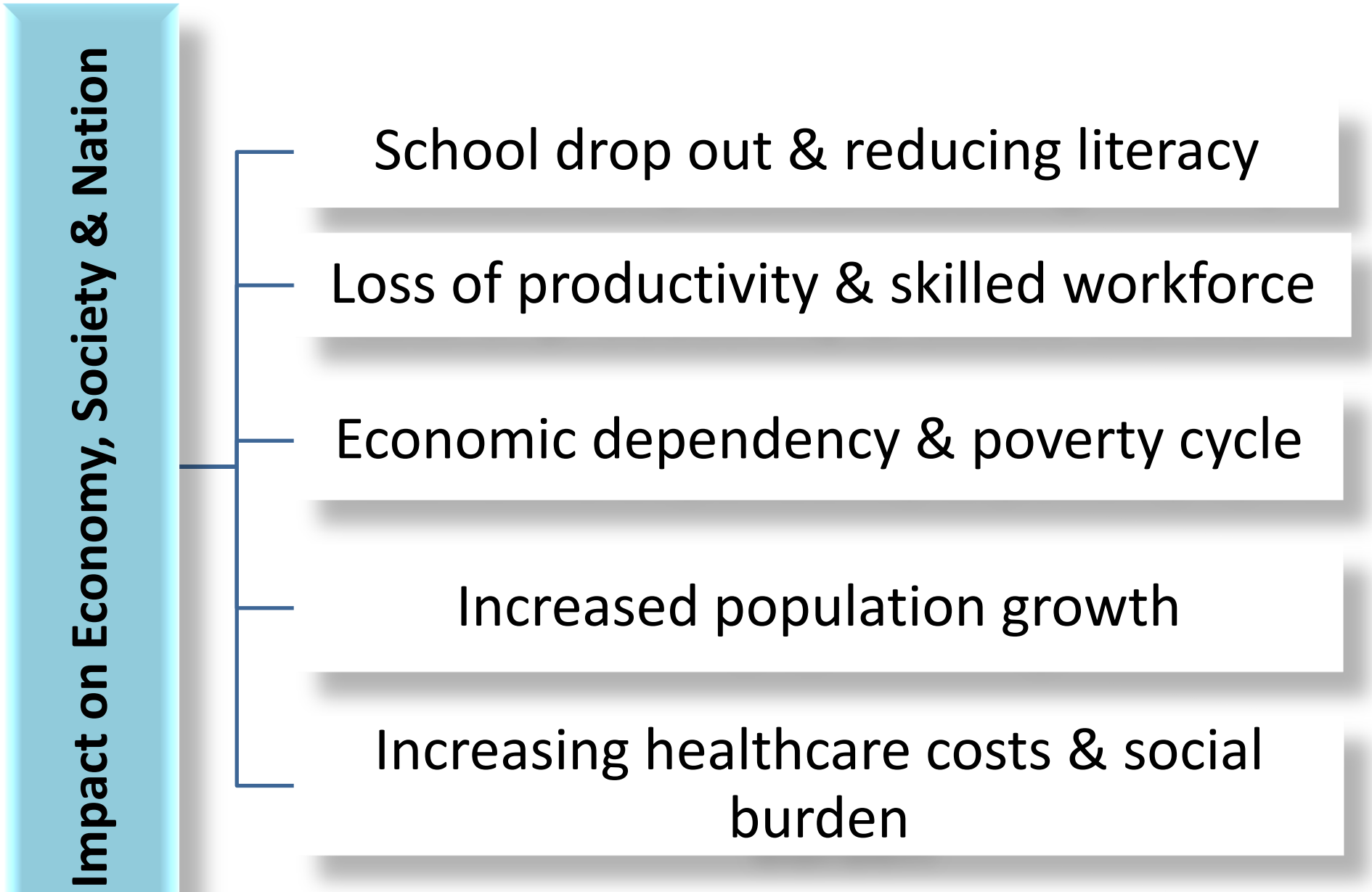

Maternal Health
Fetal & Neonatal
Economy
Society
Nation
Effects & Risks

Maternal Health Risks

- Anemia
- PIH, PE, Eclampsia
- Obstructed & prolonged labour
- Preterm labour, PPH
- Psychological stress
- Increased maternal mortality

Fetal & Neonatal Risks

- Preterm birth
- Low birth weight
- Neonatal mortality


Impact on Economy, Society & Nation
School drop out & reducing literacy
Loss of productivity & skilled workforce
Economic dependency & poverty cycle
Increased population growth
Increasing healthcare costs & social burden

Original Article

Feto-maternal Outcomes in Adolescent and Young Adult Primigravid Mothers in a Tertiary Care Hospital in Bangladesh

Tania Noor[1], Nasrin Sultana[2], Sharmin Mostafa[3], Sunjana Binte Sukur[4], Nila Akter Keya[5]

Abstract

Introduction: Adolescent pregnancy is a worldwide common health problem bearing serious social and medical implications relating to maternal and child health. In Bangladesh, pregnancy among adolescent girls is high. Approximately 66% of women under 18 years old reporting a first birth.

Objectives: We aimed to examine the obstetrical and neonatal outcomes of adolescent mother associated with first birth.

Materials & Methods: A cross-sectional descriptive study was undertaken to compare the different socio-demographic characteristics and pregnancy outcomes of adolescent primigravida mothers with those of adult primigravida mothers in a tertiary-care hospital in Bangladesh. A sample of 61 adolescent mothers in cases and 61 adult mothers of comparison group comprised the study subjects. Data were collected through interviews and by observations using a predesigned schedule.

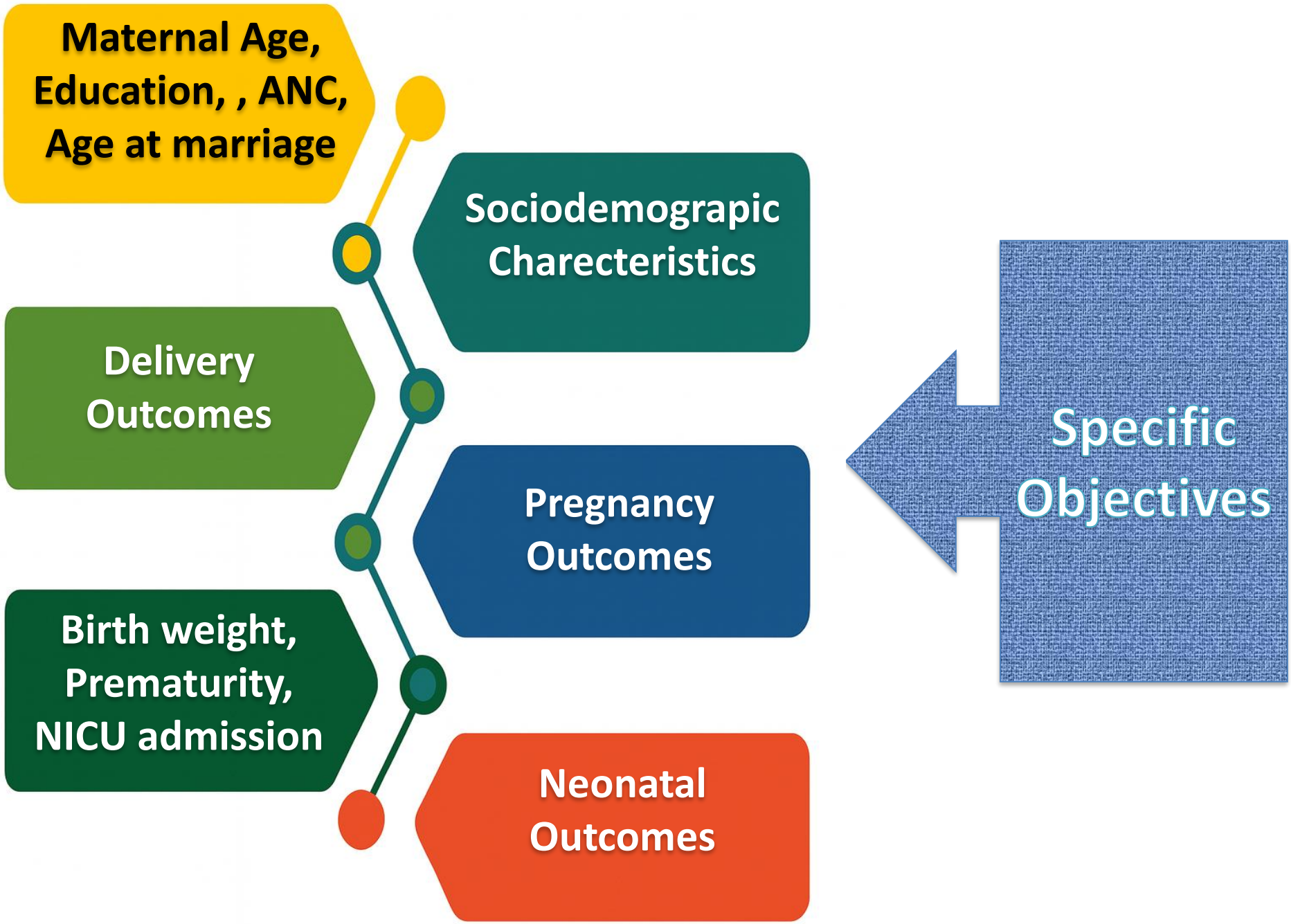
Results: Results revealed that the adolescent mothers had a higher incidence (24.6%) of caesarian deliveries compared to 4.9% in the adult mother (OR: 6.304, 95% CI: 1.712-23.1, p=0.002). Term delivery was also higher 85.2% among adolescent group (OR: 2.82, 95% CI: 1.161-6.842, P=0.019). However, adult mother had greater incidence of postdated delivery (OR: 0.236, 95% CI: 0.073-0.764, P=0.011) and spontaneous onset of labor (OR: 0.442, 95% CI: 0.212-0.921, P=0.028). There was no significant difference found regarding neonatal outcomes like preterm, low birth weight, low APGAR score and NICU admission. Most of the adolescent mother are jobless in comparison to adult mother (p=0.015).

Conclusion: Adolescent pregnancy is still a rampant and important public-health problem in Bangladesh with unfavorable pregnancy outcomes which can be overcome by creating awareness with quality antenatal, intranasal and postnatal care.

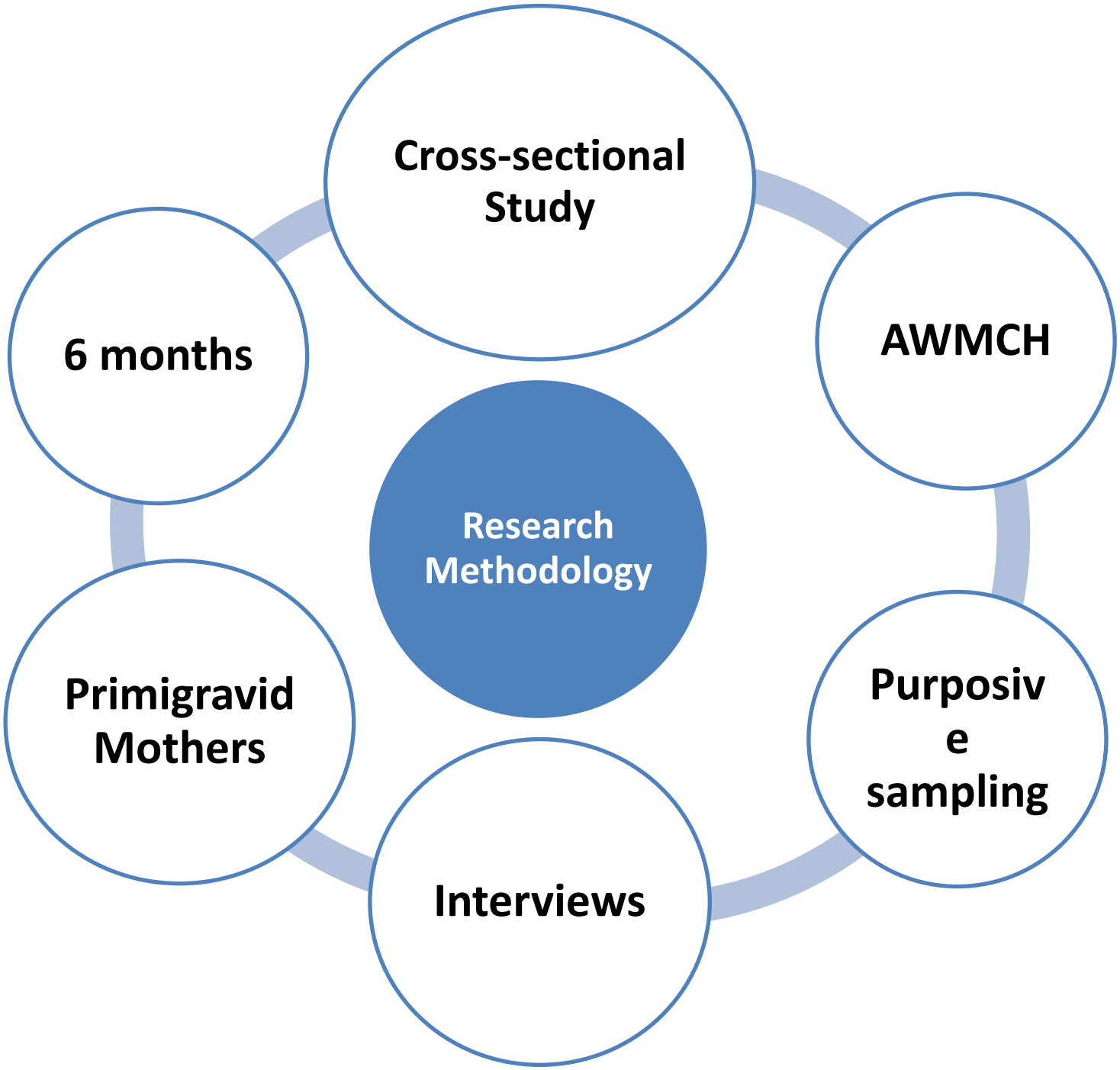
Study Objective

Genaral Objective

- To determine obstetric & neonatal outcomes of adolescent primigravid mothers


Maternal Age, Education, , ANC, Age at marriage
Sociodemograpic Charecteristics
Delivery Outcomes
Pregnancy Outcomes
Specific Objectives
Birth weight, Prematurity, NICU admission
Neonatal Outcomes


Business
Idea
Files
RESEARCH METHODS
Check
List


Cross-sectional Study
AWMCH
Purposiv e sampling
Interviews
Primigravid Mothers
6 months
Research Methodology

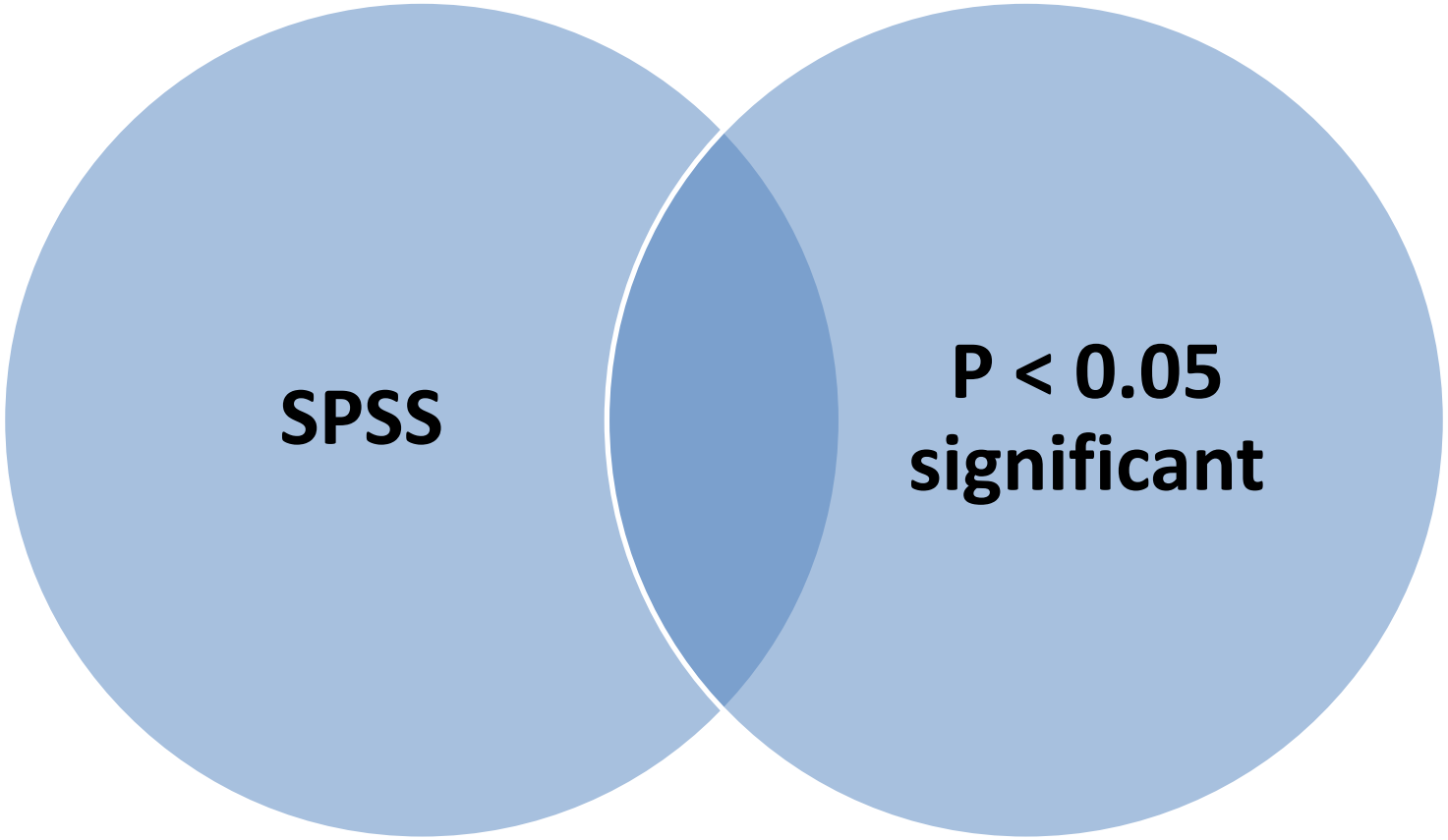
Methodology

- **Cross-sectional comparative study**
- **61 adolescents (13–19 yrs)**

VS

61 young adults (20–30 yrs)

Methodology: Data Analysis



RESULTS

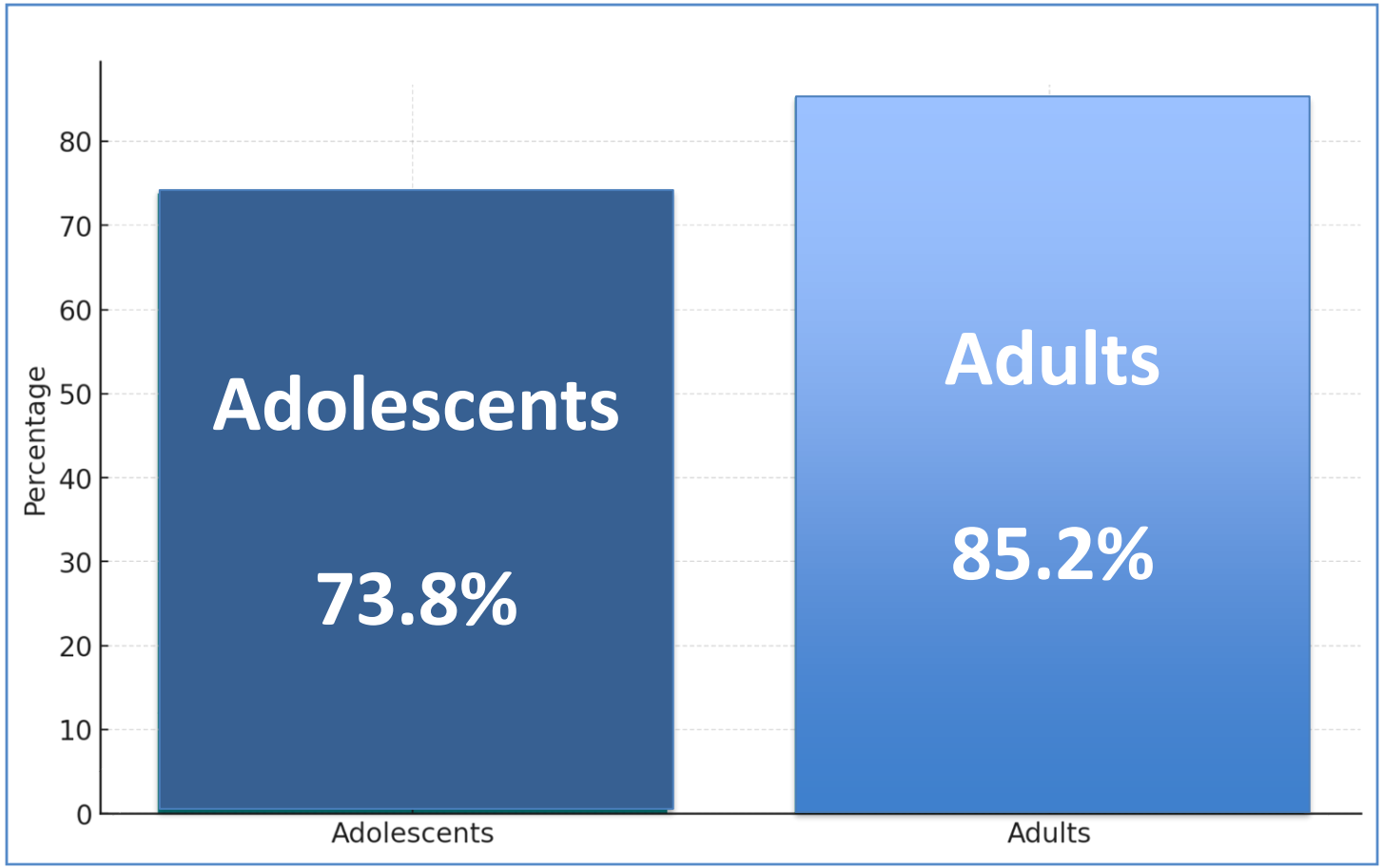
Table 1: Sociodemographic Characteristics

Variables	Adolescents (n=61)	Young Adults (n=61)
Maternal Age (mean ± SD) (in yrs)	18.4 ± 0.5	23.0 ± 2.5
Education		
Primary	21.3%	4.3%
Secondary	42.6%	21.3%
Higher Secondary	34.4%	18.0%
Graduate	0%	45.9%

Table 2: Age of Marriage

Variables	Adolescents (n=61)	Young Adults (n=61)
Age at Marriage (mean ± SD) (in yrs)	**16.8 ± 1.1**	**21.2 ± 2.9**
14-16 yrs	39.3%	1.6%
17-19 yrs	60.7%	27.9%
20-24 yrs	0%	55.7%

Figure 1: Antenatal Care

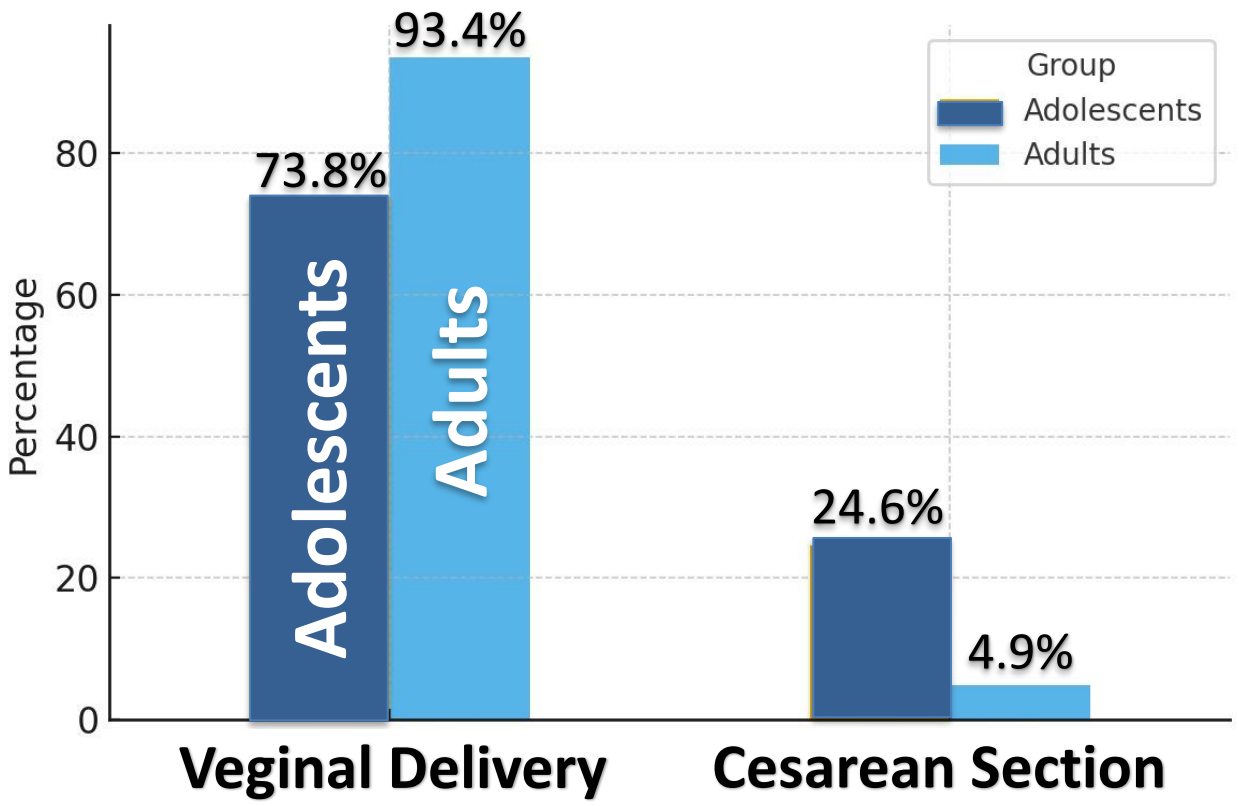


- Antenatal care (≥4 visits) was lower among adolescents compared to adults.

Table 3: Delivery Outcomes

Variables	Adolescents (n=61)	Adults (n=61)	P-Value
Gest. age at delivery (in wks.) (mean ± SD)	38.7 ± 1.46	39.1 ± 1.76	**0.251**
Time of Delivery			
Term	85.2%	67.2%	**0.019**
Preterm	8.2%	9.8%	0.752
Postdated	6.6%	23%	**0.011**

Figure 2: Mode of Delivery



- Vaginal delivery was more common among adults
- Higher rate of C-Section in adolescents.

Table 4: Neonatal Outcomes

Variables	Adolescents (n=61)	Adults (n=61)	P-Value
Mean Birth Weight	2.76 kg	2.76 kg	0.075
Low Birth Weight	18%	25%	0.377
APGAR <8 (5 min)	9.8%	4.9%	0.299
NICU Admission	14.8%	19.7%	0.472

Comparative Results

- Fewer ANC visits among adolescents Similar trends reported in Egypt and Sudan studies (Galal, 2016; Mayor, 2014)
- Post-term pregnancy more common in adults Comparable to Indian hospital-based study (Mukhopadhyay, 2010)

Comparative Results

- Higher C-section rate in adolescents (CPD, fetal distress) supported by studies from Pakistan (Tufail, 2018), Jordan (Al-Ramahi, 2016), WHO reviews

Limitations of the Study

- Hospital-based sample
- Small sample size
- Short study period
- Lack of follow-up
- Possible information bias

Recomendation to overcome the situation

Healthcare Provider

Community & NGOs

Govt. & Policy Makers

Role of Health Care Providers

- Contraceptives counselling
- Antenatal care
- Adolescent-friendly reproductive health care services

Community and NGO Involvement

- Expand community awareness
- Encourage family planning
- Educate families about early pregnancy risks

Role of Government and Policy Makers

- Enforcement of laws against child marriage
- Girls' education and school retention
- Public campaigns on reproductive health

Conclusion

- Adolescent pregnancy is a multidimentional issue
- Strong policies, education, and awareness, to empowered adolescent
- Preventing early pregnancy leads to Investing in Bangladesh’s future

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Thank You