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Teen-age pregnancy, knowledge and attitude towards it among pregnant women attending Ante-Natal Clinic of a tertiary health care hospital of the highest literate district of West Bengal

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Abstract

Background: Teen-age pregnancy is a rising social problem, can cause a lot of maternal and fetal complications. This study was conducted to find out proportion of teen-age pregnancy and knowledge and attitude towards it among the pregnant women.

Materials and methods: This cross-sectional study included 205 pregnant women attending ante-natal clinic of a tertiary care hospital of Purba Midnapore, West Bengal with one month of duration. socio-demographic, marital, pregnancy related details and knowledge, attitude towards teen-age pregnancy were taken in a pre-designed, pretested questionnaire.

Results: Most of the participants were in the age-group of 20 years to 39 years (78.5%), from rural areas (88.3%), were literate mostly having education till secondary level (37.1%), belongs to lower-middle class socio-economic status (42.4%). Teen-age pregnancy proportion was 21%. Majority responded about ideal age of getting pregnant should be more than 21 years (70.2%). 77.1% responded positively about harmfulness of getting pregnant before 19 years of age. 65.3% knew about contraceptive methods. 67.8% thought education regarding contraceptives and reproduction is necessary in school. 94.7% agreed that pregnancy should be planned with their consent. 79% heard of The Prohibition of Child Marriage (PCMA) Act and 68% heard of Protection of Children from Sexual Offences Act (POCSO) act.

Conclusion: Teenage pregnancy remains a significant public health issue and gaps in awareness and practice persist. Strengthening school-based reproductive education, healthcare accessibility, and community engagement can improve knowledge and attitudes towards teenage pregnancy.

INTRODUCTION

According to the WHO, adolescents are individuals aged 10 to 19 years. This stage of life is crucial for human development and plays a vital role in establishing the foundation for good health.¹ Adolescence is a transitional period from childhood to adulthood characterized by significant physiological, psychological and social changes. Adolescent pregnancy or teen-age pregnancy poses significant health risks, often leading to complications. During this stage, physical and mental development is still incomplete, placing additional stress on the mother.² Adolescent pregnancy is associated with maternal outcomes like Postpartum haemorrhage (PPH), anaemia, Pregnancy induced hypertension (PIH), Puerperal sepsis, Premature rupture of membranes (PROM) and Preterm labour even mortality. Teenage pregnancy also associated with adverse foetal outcomes like preterm births, low birth weight babies, still births etc.³ In developing nations like India, teen-age pregnancy remains a concern. According to NFHS-5 data, the prevalence of teen-age pregnancy in India 7% where as in West Bengal 16%.⁴ Adolescent pregnancy is seen as a social issue due to inadequate sex education and contraception and due to customs and traditions supporting adolescent marriages. Higher rates of adolescent pregnancy attributable to a deeply entrenched practice of child marriage, inadequate sex education and contraception poor access to health care, poverty, and low literacy

Keywords: Teen-age pregnancy, knowledge, attitude



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levels. Teenage pregnancy is a concerning public health problem in India. Misperception and misunderstanding about pregnancy and its preventive methods lead to pregnancy when adolescents are involved in unsafe sexual intercourse. Studies have suggested that misconception, lack of understanding, and practices without knowing the consequences are the key factors responsible for early pregnancies. Future interventions like increasing awareness, providing comprehensive reproductive knowledge, convenient health care aids, and proper counselling are adequate measures for minimalizing the problem. Despite having a higher literacy rate, the district Purba Medinipur has a higher teen-age pregnancy rate according to NFHS-5 Data.⁵ Hence, with this background, the present study was conducted in a tertiary care hospital of Purba Medinipur to assess knowledge and attitude of adolescent pregnancy among the mothers attending the ante-natal clinic (ANC).

SPECIFIC OBJECTIVES

- To describe the socio-demographic factors of the study participants attending ANC clinic of a tertiary care hospital of Purba Medinipur
- To estimate the proportion of teen-age-pregnancy among the pregnant women
- To find out knowledge and attitude towards teen-age pregnancy among the pregnant women

MATERIALS AND METHODS

Study type: It is an epidemiological descriptive type of study.

Study design: It is a cross-sectional study design.

Study Setting: Antenatal out-patient department of Tamralipto Government Medical College and Hospital; A tertiary Health Care Centre of Purba Medinipur.

Study Period: It was conducted from 16/02/2024 to 15/03/2024; one month duration.

Study Population: All pregnant women coming in Antenatal clinic of Gynae and Obstetrics Department

Inclusion Criteria: Pregnant who were willing to participate in study.

Exclusion Criteria:

- Individuals not giving consent
- History of chronic illness

Sample size Sampling technique: 16% prevalence of teen-age pregnancy in West Bengal according to NFHS-5 data, 5% absolute error, minimum required sample size calculated was $n = 206.5 \sim 207$.⁴

Systematic Random Sampling was applied; Four days were selected for data collection based on feasibility. From the record average patient 200 per day in ANC clinic ($200 \times 4 = 800$); each day approximate 207/4 = 51.7 ~ 52 patients were interviewed. Sampling interval was

calculated as $800/207 = 3.8 \sim 4$. A random number selection was made between 1 and 4 and the first patient to be interviewed on that day corresponded to the random number selected from the queue.

Study Tools:

Pre-tested, semi-structured questionnaire with 3 parts

- Socio-demographic characteristics,
- Obstetric details,
- Knowledge & perception regarding teen-age pregnancy and legal acts.

Study Variables:

Age	Educational qualification	Contraceptive knowledge & use
Religion	Marital Status	Knowledge and attitude
Residence	Age of Marriage	Sources of health education
Caste	Gravida	Knowledge of PCMA act and POCSO act
Occupational status	Age of first pregnancy	

Operational definitions:

Teen-age pregnancy: Pregnancy in a female adolescent or young adult under the age of 19 completed years (WHO).¹

Socio-economic status: Modified B. G. Prasad scale AICPI October 2023.⁶

- Class I (Upper class) $\geq ₹ 9098$
- Class II (upper middle) (₹ 4551-9097)
- Class III (middle) (₹ 2729-4550)
- Class IV (lower middle) (₹ 1366-2728)
- Class V (lower) ($< ₹ 1365$)

Study Procedure: Topic was decided and discussed among team members. Pre-tested, semi-structured questionnaire was prepared on google form. Data collection was done in the antenatal clinic after obtaining proper consent from the participants.

Statistical analysis: Collected data of 205 participants were checked for consistency completeness and entered in Microsoft Excel data sheet. Data were organized and presented using the principles of descriptive and inferential statistics. Categorical variables were expressed in percentage of total participants. Continuous variables were expressed as Mean \pm Standard Deviation.





Ethical issues:

- Permission was taken from the authority of the institution
- Informed consent was taken from the participants and explained in their own language about nature of study and procedures, purpose and voluntary nature of participation
- Respondents were assured about the anonymity and confidentiality of the information they have provided
- No harm was caused to the children in the current study

RESULT

In this study total 211 data were collected. But due to duplicate data and incomplete data, analysis was done among 205 participants. Most of the participants were in the age-group of 20 years to 39 years (78.5%), followed by 19 years or less (21%). Very few were aged 40 years or above (0.5%) [table 1]. Majority were from rural areas (88.3%), were Hindu by religion (69.3%), belongs to general caste (61.4%). Majority were literate having education till secondary level (37.1%), followed by higher secondary level (27.8%). 9 out of 10 women were unemployed or housewife in the present study. Maximum belongs to lower-middle class socio-economic status (42.4%) [table 1].

As figure 1 is stating, in the present study teen-age pregnancy (based on current pregnancy status only) seen was 21%. 98.5% were married, and maximum were married in the age-group of 16 to 19 years of age (60.5%) and due to parental decision (66.3%) [table 2]. 53.6% were primi-gravida, 37.1% participants had unplanned pregnancy and 33.6% used contraceptive methods.

When knowledge and attitude were explored among the study participants (table 3), majority responded about ideal age of getting pregnant should be more than 21 years (70.2%). 77.1% responded positively about harmfulness of getting pregnant before 19 years of age. 65.3% knew about contraceptive methods. Sources of health education for the participants were mainly their family (50.2%), health care workers (41.4%), TV (40.5%), social media (37.5%) etc. 67.8% thought education regarding contraceptives and reproduction is necessary in school. 94.7% agreed that pregnancy should be planned with their consent. 79% heard of The Prohibition of Child Marriage (PCMA) Act and 68% heard of Protection of Children from Sexual Offences Act (POCSO) act.

DISCUSSION

Prevalence and socio-demographic Factors

Teenage pregnancy was observed in 21% of participants, highlighting a significant public health concern despite the region's high literacy rate. In comparison the prevalence of teen-age pregnancy in India 7% where as in West Bengal 16%.⁴ The majority of participants were in the age group of 20–39 years (78.5%), belonged to rural areas (88.3%), literacy levels were relatively high, with most participants having completed secondary (37.1%) or higher secondary (27.8%) education, with 42.4% belonging to the lower-middle-class socioeco-

omic status. A qualitative study from Maharashtra indicated that girls from low socioeconomic backgrounds are at a greater risk of adolescent pregnancy. However, it also found that residing in rural areas, having secondary or higher secondary education, and higher maternal education were linked to a reduced likelihood of adolescent pregnancy.⁷

Marriage and Pregnancy

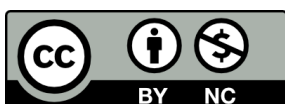
The study found that 98.5% of participants were married, with the majority (60.5%) having married between the ages of 16 and 19 years, primarily due to parental decisions (66.3%). The early age of marriage correlates with the prevalence of teenage pregnancy, as cultural and familial expectations often influence reproductive choices. Another study from West Bengal also revealed the maximum participants got married in the age between 15 to 17 years.⁸ The majority of participants were primigravida, and a substantial proportion experienced unplanned pregnancies, highlighting the need for improved reproductive health education and family planning services. While more than 60% had knowledge of contraceptive methods, only 33.6% reported using them, indicating a gap between awareness and utilization. A meta-analysis found that contraceptive use (pooled odds ratio: 0.60; 95% confidence interval: 0.35–1.02), particularly long-acting reversible contraceptives (pooled odds ratio: 0.19; 95% confidence interval: 0.08–0.45), significantly reduced the risk of repeated teenage pregnancies.⁹ Another study discussed about early marriage, social expectations and lack of knowledge on contraceptives were significantly imposing high prevalence burden of teen-age pregnancy.⁷

Knowledge and attitude

A high proportion of participants believed that the ideal age for pregnancy should be above 21 years, and knew harmful consequences of pregnancies occurring before 19 years. Sources of health education were predominantly family members, followed by healthcare workers, television, and social media. This suggests that while mass media plays a role in disseminating reproductive health information, family and healthcare professionals remain primary influencers. Encouragingly, majority of participants agreed on incorporating structured reproductive health education in school curriculum and preference over individual autonomy in reproductive decisions indicating a favorable attitude towards controlling the rising problem. A review of the literature highlights that misconceptions, lack of awareness, and uninformed practices are major contributors to early pregnancies.¹⁰ A study from another district of West Bengal explored and suggested that lack of awareness, various social constraints, socio-cultural issues were important factors to consider for teen-age pregnancy.¹¹ The study revealed significant awareness of legal provisions related to child marriage and sexual offenses.

LIMITATIONS

This study has certain limitations. Since data were collected from a single tertiary care hospital, findings may not be generalizable to the entire district. Additionally, self-reported data may be subject to recall bias or social desirability bias, particularly regarding sensitive topics like contraceptive use and marriage decisions.





CONCLUSION

In conclusion, teenage pregnancy remains a significant public health issue even in highly literate regions. While knowledge about reproductive health is relatively high, gaps in awareness and practice persist. Addressing these issues requires a holistic approach involving reproductive education, healthcare accessibility, and community engagement to improve knowledge and attitudes towards teenage pregnancy and reproductive health. Strengthening school-based reproductive health education, legal enforcement and policy implementation can help to reduce this problem.

CONFLICT OF INTEREST

None Declared.

FUNDING

None Declared.

Table 1: Distribution of study participants according to Socio-demographic details (n=205)

Variables	Frequency	Percentage (%)	
Age (years)	≤ 19	43	21.0
	20 - 39	161	78.5
	≥ 40	1	0.5
<i>Mean age 23.2±4.7 years</i>			
Residence	Rural	181	88.3
	Urban	24	11.7
Religion	Hindu	142	69.3
	Muslim	63	30.7
Caste	General	126	61.4
	SC	28	13.6
	ST	1	0.4
	OBC	48	23.4
	Not Identified	2	0.9
Participant Education	Illiterate	4	1.9
	Primary School	6	2.9
	Middle School	40	19.5
	Secondary School	76	37.1
	Higher Secondary	57	27.8
	Graduation & above	22	10.8
Occupation of Participants	Professional	3	1.4
	Semi-Skilled Worker	11	5.4
	Skilled Worker	5	2.4
	Unemployed / House wife	186	90.8
Socio-economic status*	Lower Class	45	22.0
	Lower Middle Class	87	42.4
	Middle Class	41	20.0
	Upper Middle Class	21	10.2
	Upper Class	4	2.0
	No information available	7	3.4
Total	205	100	

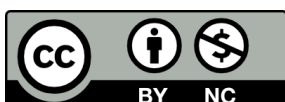


Figure 1: Pie diagram showing proportion of teen-age pregnancy among the participants (n=205)

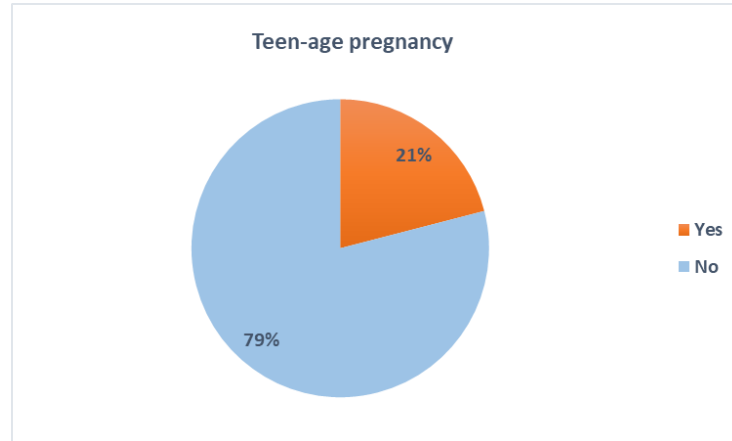


Table 2: Details of pregnancy and use of contraceptive (n=205)

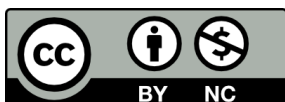
Variable	Item	Frequency	Percentage (%)
Marital status	Married	202	98.5
	Unmarried	3	1.5
Age of marriage (years)	≤15	20	9.8
	16-19	124	60.5
	20 or above	58	28.3
	Not Applicable	3	1.4
Reason behind marriage	Parental decision	136	66.3
	Your choice	59	28.8
	Partner's force	6	2.9
	Peer's influence	1	0.5
	Not applicable*	3	1.5
Gravida	Primi Gravida	110	53.6
	Multi Gravida (2-5)	95	46.4
Unplanned/accidental pregnancy	Yes	76	37.1
	No	129	62.9
Use of any contraceptive method	Yes	69	33.6
	No	133	64.9
	No response	3	1.5
Total		205	100



Table 3: Knowledge and attitude towards teen-age pregnancy (n=205)

Knowledge and attitude		Frequency	Percentage (%)
What is the ideal Age of getting pregnant?	≤21 years	40	19.5
	>21 years	144	70.2
	Don't know	21	10.3
Do you think pregnancy before 19 years is harmful?	Yes	158	77.1
	No	15	7.3
	Don't know	32	15.6
Do you know about any contraceptive methods?	Yes	134	65.3
	No	68	33.2
	No response	3	1.5
Sources of health education*	Family	103	50.2
	Health care workers	85	41.4
	TV	83	40.5
	Social media	77	37.5
	Institution (school, college)	32	15.6
	Neighbor	26	12.7
Do you think education regarding contraceptives and reproduction is necessary in school?	Yes	139	67.8
	No	11	5.4
	Don't know	55	26.8
Do you think pregnancy should be planned with your consent?	Yes	194	94.7
	No	5	2.4
	No response	6	2.9
Have you heard of The Prohibition of Child Marriage (PCMA) Act?	Yes	161	79
	No	44	21
Have you heard of Protection of Children from Sexual Offences Act (POCSO) act?	Yes	139	68
	No	66	32
Total		205	100

*Multiple responses recorded



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