

# Adolescent Reproductive Health in India: A Narrative Review

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## ABSTRACT

Adolescence is one of the life's most significant periods, with distinct reproductive health requirements. Adolescents have specific sexual and reproductive health needs, regardless of whether they are sexually active or married. Adolescents often have little understanding of the biological changes and disorders that might impact them. The most practical need is to address reproductive health issues among adolescents, assess social security measures and causes, and identify reasons for limited access to healthcare services. This review relied on previously accessible data from secondary sources like books, journals and e-resources in digital platforms of PubMed, Research Gate, Sci-Hub, and Google Scholar. At present, adolescent health programmes are scattered and do not meet all their requirements. Barriers include a lack of credible information, direction, parental ignorance, skills, and poor healthcare services. A comprehensive strategy to addressing young adults' health needs should include reproductive health, social security, mental well-being, and communication initiatives to promote a healthy lifestyle.

**Keywords:** Adolescence, Reproductive health, Sexual health, Social security measures

## INTRODUCTION

India has about 243 million adolescents, accounting for over 20% of the total population (Mehta *et al.*, 2013). Reproductive health encompasses all aspects of the reproductive system, including physical, mental, and social well-being, beyond only the absence of sickness or infirmity (WHO, 2022). Transitioning from infancy to adulthood brings major physical, psychological, and social changes that might negatively impact one's life (Cleveland, 2018). Adolescents are vulnerable to severe health conditions such as violence, mental health issues, alcohol and drug abuse, unwanted pregnancies, unsafe abortions, early pregnancy and childbirth, injuries, Sexually Transmitted Infections (STIs), HIV/AIDS, and sexual violence. Early marriage and childbearing may increase maternal and neonatal death rates in some member nations. Reproductive health is an essential component of health and a fundamental factor of human growth. It contributes significantly to a population's health requirements. In India, reproductive health is closely linked

to social, cultural, and economic variables that impact all areas of life. According to WHO, reproductive health is a condition of total physical, mental, and social well-being, not only the absence of sickness or infirmity. It addresses reproductive or sexual health, hygiene, reproductive processes, functions, and systems throughout life. Young people's potential to become well-adjusted, responsible, and productive members of society is dependent on their reproductive health. To address adolescent health and financial concerns, it's important to consider their social, cultural, and economic contexts. To achieve this, the Indian government developed national programmes, including Adolescent Reproductive and Sexual Health (ARSH) in 2005 and Rashtriya Kishor Swasthya Karyakram (RKSK) in 2014 (Barua *et al.*, 2020). In 2014, the Ministry of Health and Family Welfare (MoHFW) replaced the ARSH strategy with RKSK to align with the new National Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) Strategy's focus on a continuum of care approach (National Health Mission, 2025).

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Adolescence is a period of biological growth and development when the transition from childhood to adulthood occurs (Okeke *et al.*, 2022). The most important change during this time is rapid development of reproductive organs. The girls reach puberty, and their menstrual cycle begins. Some females marry and have two children before they reach the age of 20. All of this occurs mechanically, with no or limited awareness of reproductive health. Emotions and temper tantrums over reproductive processes stay as questions and will continue to the following generation.

Reproductive health is a necessary component of health and a significant factor of human growth. It contributes significantly to a population's health requirements. In India, reproductive health status is closely linked to social, cultural, and economic issues that affect every part of life. According to the World Health Organisation, reproductive health is a condition of total physical, mental, and social well-being, rather than the absence of sickness or disability. It focuses on reproductive or sexual health, hygiene, reproductive processes, functions, and systems throughout the life cycle. Reproductive health is critical to young people's potential to become well-adjusted, responsible, and productive members of society. Previous study suggests that using an educational approach can considerably enhance teenagers' and people's understanding of sexually transmitted infections. At this age, individuals have a greater interest in sexuality and may want sex with the opposing gender. The mainstream press can expose individuals to internet pornography, prompting them to commit sexual assaults (Mehta *et al.*, 2013). Adolescents' overall health improves with both positive social and physical health. Adolescents are increasingly prone to sexual, physical, and violent words. For a long time, there was no established structure to manage young people's social requirements. Poor reproductive, maternal, neonatal, and child health and nutrition (RMNCH&N) outcomes are a significant public health problem in the country (Singh *et al.*, 2022).

According to the National Family Health Survey (NFHS-5) 2019-2021, approximately 50% of pregnant women are anaemic, with just a slight decrease. Adolescents now make up 16% of the global population, with India leading the way (UNICEF, 2021). In India, at least 42% of females choose cloth sanitary pads over disposable Napkins (Sivagurunathan *et al.*, 2015). It is hardly surprising that only 26% of adolescent females

with excessive menstrual bleeding sought medical assistance (UNICEF, 2021). Overall, 64% of females experience at least one menstrual-related ailment (Sharanya, 2014). Around 9% of rural teenage females and 5% of urban adolescent girls aged 15-19 have given birth. Despite widespread knowledge of modern contraception (>90%), only one-fifth of adolescent females utilise it (Prasad *et al.*, 2015). Adolescents' lack of awareness and information about sexual reproductive health is a cause for concern (Obach *et al.*, 2022). Adolescent sexual activity typically begins during adolescence, with 3% of males and 8% of females having intimate relationships before the age of 15. Additionally, 1% of females and 63% of males aged 15-19 years had elevated sex with a non-marital, non-cohabiting companion, and 31% of males and 20% of females using a contraceptive (Chandra-Mouli, *et al.*, 2020). Adolescents had less skilled birth care than mothers and girls overall (75-81%). Adolescent girls, like other women and girls, received postpartum care at a rate of around 65% (UNICEF, 2021). Globally, adolescent girls received 75-81% less maternal and neonatal therapy compared to women and girls combined. Teenage girls receive postnatal care at a comparable rate as women and girls, at 65% (Rani and Bonu, 2003). According to nationally representative research (Sabarwal and Santhya, 2012; Prasad *et al.*, 2015). 11-18% of Indian women experience self-reported symptoms of Reproductive Tract Infections (RTI). The World Health Organisation reports that over one million people globally contract sexually transmitted infections (STIs). According to the World Health Organisation (WHO), 500 million new cases of one of four treatable sexually transmitted infections (STIs) are reported globally (National Health Portal of India, 2021). Over 1.9 billion individuals worldwide suffer from anaemia, making it a significant public health issue (Chaparro and Suchdev, 2019).

## METHODOLOGY

This review paper examines the reproductive health of teenagers in India, estimating social security measures and related determinants. Our study was based on extensive research from many sources, both local and international. We scanned government portals and websites for relevant data and literature, including PubMed, ResearchGate, Sci-Hub, and Google Scholar. The objective was to enhance teenage healthcare and

social security, develop public awareness, and match their needs and aspirations through policy changes. In India, reproductive health and sexual diseases are major but understudied health and safety concerns. India's lack of an adolescent health policy necessitates the development of a national one.

The review found that Adolescent Reproductive Health (ARH), counselling, and contraceptive accessibility can improve teenage awareness about reproductive health, menstruation, contraceptive usage, and reduce adolescent pregnancy.

The following are some significant reproductive health issues: (i) Overpopulation: Increased population leads to shortage of basic necessities, negatively impacting reproductive health, (ii) Inadequate sex education can lead to a lack of concern for safe and healthy sexual activities, (iii) Adolescence-related alterations: the changes in teenagers can lead to sex abuse and affect reproductive health, (iv) Sexually transmitted diseases: These illnesses can impact reproductive health, (v) Sex abuse and associated crimes can lead to bodily harm, undesired pregnancy, vaginal discharge, and pelvic discomfort.

## RESULTS AND DISCUSSION

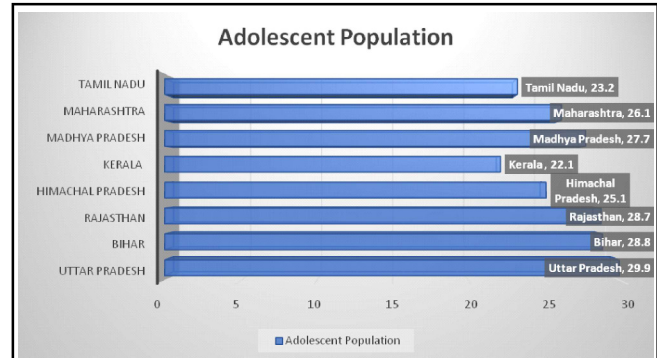
### Reproductive and Sexual Health among Adolescents:

Adolescents experience a variety of sexual and reproductive health concerns. According to the NFHS-5 statistics, 10.5% of boys and 25% of girls had their first sex before the age of 15. Sexual activity often occurs inside marriage partnerships, leading to fast childbearing due to societal pressure (Sivagurunathan *et al.*, 2015; NFHS, 2022). Table 1 and Fig. 1 show the state wise percentage of teenagers.

Although 94% of girls aged 15-19 are aware of

Top Indian States	Adolescents (%)
Uttar Pradesh	29.9
Bihar	28.8
Rajasthan	28.7
Himachal Pradesh	25.1
Kerala	22.1
Madhya Pradesh	27.7
Maharashtra	26.1
Tamil Nadu	23.2

Source: Youth in India 2022 Report, MoSPI.



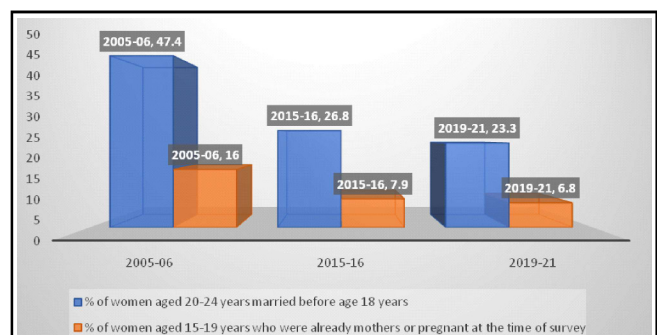
**Fig. 1 : Indian States Having Highest Adolescent Population**

contraception, just 23% of married girls and 18% of sexually active unmarried females have used it at least once. The frequency of all five NFHS in pregnant and parented teenagers is approximately decreasing (59.1%, 59.8%, 58.2%, 51% and 43%, respectively), while the age of first pregnancy among adolescents is continuously

**Table 2 : Reproductive and sexual health status of adolescents in India (UNICEF and NFHS-5)**

Reproductive Factors	Adolescent Boys (%)	Adolescent Girls (%)
Before the age of 15, the sexual debut	2.7	8.0
Awareness of contraceptive methods (15-19 years)	96.0	94.0
Control method ever used	29.4	40.4
Condom use during the first time	19.0	3.0
Comprehensive understanding of HIV in adolescents	34.5	18.6
STI symptoms in adolescents	10.8	10.5
HIV prevalence among adolescents	0.01	0.07

**Source:** United Nations International Children's Emergency Fund (UNICEF) and the National Family Health Survey 5 (NFHS-5). STI: sexually transmitted infection.



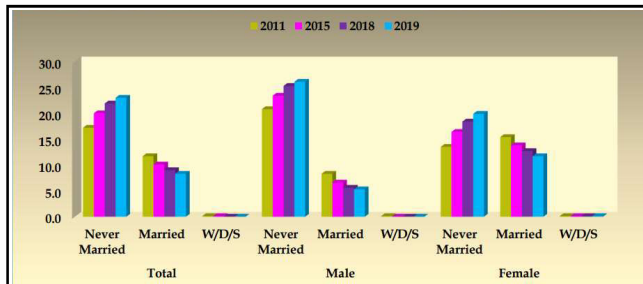
Source: NFHS-3, NFHS-4 and NFHS-5 Factsheet

**Fig. 2 : Early Marriage and Early Childbearing**

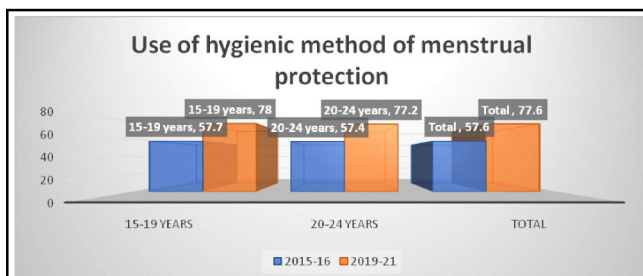
**Table 3 : Different Contraceptive Methods currently used by Adolescents (15-19 years) in India**

Years	Contraceptive Methods Used						
	Any Method	Any Modern Method	Any Traditional Method	Female sterilization	Male sterilization	Pill	IUD/ PPIUD
2015-16	14.9	10	4.9	0.9	0	3.9	0.5
2019-21	28.1	18.8	9.4	0.4	0	4.9	2.1

Source: NFHS-4 and NFHS-5 National Report



Source: Sample Registration System, O/o RGI

**Fig. 3 : Share of Youth (%) by Marital Status and Sex**

Source: NFHS-4 and NFHS-5 National Report

**Fig. 4 : Percentage of women age 15-24 years who have ever menstruated using a hygienic method**

increasing (11.7, 12.4%, 14.4%, 17.3% and 18.25 respectively). This development can be attributed to poor condom usage and sexual relationships (Sivagurunathan *et al.*, 2015). Table 2 and Fig. 2 show the reproductive and sexual health status in India.

### Adolescent Reproductive Health:

ARH is the most important component during the teenage stage of life. This period establishes a behavioural habit that impacts present health and increases the likelihood of chronic illnesses later in life (Prasad *et al.*, 2015). The state should prioritise providing quality, affordable, and accessible adolescent health care (Sunitha and Gururaj, 2014). High-risk sexual behaviour refers to unprotected intercourse without condoms, except in long-term monogamous relationships, unprotected mouth-to-genital contact, multiple sex partners, or having a high-risk partner (Finkelstein *et al.*, 2022). Women of

reproductive age have a higher risk of anaemia and iron insufficiency due to blood loss during menstruation and increased iron needs during pregnancy (Forbes and Dahl, 2010).

### Pubertal Behaviour:

Understanding puberty-related behavioural changes is crucial for appropriate adolescent development and has significant clinical and social policy implications. Understanding the health paradox of adolescence requires considering how motivational inclinations interact with social circumstances (Kumar *et al.*, 2021). Adolescent reproductive health concerns are diverse, but often stem from challenges with emotional and behavioural regulation. Youth violence, from bullying to homicide, is a major cause of premature mortality, injury, and disability. It affects not just adolescents but also their families, friends, and communities (National Family Health Survey, 2019-2021).

### Menstruation:

Menstruation is a major transition for girls during adolescence. Adolescent females in low and middle-income countries (LMICs) have significant challenges in managing menstrual hygiene (MHM) (Majeed *et al.*, 2022). Hygiene behaviours during menstruation may increase the chance of getting reproductive tract infections (Sharma *et al.*, 2017). Menstruation is viewed as ugly or disgusting in Indian society, despite it being a natural part of life and related with beliefs about its deleterious impact on health (Shanbhag *et al.*, 2012). MHM is a major issue for school-aged teens in India due to a lack of safe and sanitary facilities, as well as a scarcity of menstrual hygiene products and services (Sharma *et al.*, 2017; Ayushree and Udgata, 2024). As a result, many girls drop out of school. Menstrual irregularities and disorders can cause physical, emotional, social, psychological, and reproductive challenges for teenagers and their families, including anxiety (Dars, *et al.* 2014). Maintaining excellent cleanliness during menstruation is crucial for women, since they are more susceptible to

reproductive system infections (Singh *et al.*, 2001).

### **Contraceptives:**

Low contraceptive usage may be due to limited access to knowledge and services, as well as early marriage and childbirth, which have been linked to poorer education (Khanna *et al.*, 2018). In India, there are less contraceptives, leading to a high frequency of reproductive tract infections. According to a study (Sreedevi *et al.*, 2022), 26.4% of indigenous reproductive-age women take contraception. Knowledge about contraception is essential for their usage. Educated individuals had higher knowledge ratings for emergency contraception, which was consistent with previous research (Sreedevi *et al.*, 2022). Contraceptive-induced menstrual changes (CIMCs) have both beneficial and negative effects on the life of contraceptive users (Halpin *et al.*, 2021).

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### **Adolescent-Friendly Health Clinics (AFHC):**

RKSK emphasises the need for adolescent-friendly health clinics (AFHCs) in its facility-based approach (National Health Mission, 2022). Adolescents have unique health concerns that adult and paediatric specialists may not be equipped to manage. To protect adolescents from diseases, sexually transmitted diseases, unintended pregnancy, HIV transmission, and alcohol and drug abuse, communities should address their specific needs. Governments should also invest in adolescent-friendly healthcare services in health facilities, clinics, and youth centres. To ensure adolescents have access to healthcare services, it's important to provide a comfortable and private environment where they may get prescriptions and counselling (Singh *et al.*, 2018).

### **Government Programs:**

The Indian government's MoHFW developed the ARH strategy in 2005 as part of the National Rural Health Goal, Human Development, and Children's Health Programme to improve adolescent health and social security. The strategy aims to broaden the definition and media attention of family assistance programmes. Several states and union territories included ARH initiatives into their Reproductive Child Health-II (RCH-II) and Performance Improvement Plans (PIPs) to increase programme implementation accuracy and effectiveness. The ARH offers preventative, promotional, and curative treatments that benefit all adolescents (Department of Women and Child Development, 2022). The ARH plan focused on diverting healthcare resources, realigning brand recognition, and constructing adolescent-friendly health centres. The technique established reasonable criteria to improve service quality and provided direction for implementation. Several nations complemented the strategic plan with activities to increase provider expertise and raise awareness, resulting in less concentrated demand generation efforts. In 2014, the ARH strategy was superseded by RKSK due to the new RMNCH+A strategy's contribution to a healthcare delivery model. ARH has been overlooked in favour of non-communicable illnesses, nutrition, psychological health, injuries, and drug addiction. It implements medical and social service delivery methods and creates demand initiatives. RKSK implementation is presently underway around the country, with a focus on 213 districts (National Health Mission, 2022).

### **Conclusion:**

Adolescents are highly restricted in terms of attitudes and understanding about ARH concerns. The findings highlight the need to strengthen ARH communication with teenagers and raise awareness in a positive manner. A comprehensive approach to adolescent reproductive health and social security requires addressing mental well-being, promoting healthy lifestyles through communication, and creating a positive social environment for learning life skills. Policymakers should include several sectors, such as health, education, and youth services, to give diverse information and improve unfavourable attitudes about ARH communication with teenagers. Adolescent-friendly clinics must be widely acknowledged in India to ensure comprehensive coverage. Regular teenage screening helps control illnesses and prevent



sexual and reproductive problems. Encourage and require teenagers to make important decisions that will help them become effective adults. Giving teenagers the opportunity to grow leads to a more secure, joyous, healthy, and constructive society in the future.

### Recommendations:

Identifying teenagers' perceived requirements during planning is crucial, and services must be of high quality. It is also critical to enhance teenagers' awareness of the value and necessity of the services and urge them to use them. Steps should be done to postpone the marriage age by campaigning, counsel, and strict respect to the law. Adults should be educated on how to avoid young marriage, adolescent births, and the associated consequences. All primary health care (PHCs) must be able to provide AFHS outside the standard hours. A dedicated wing can be developed to categorise teenagers in tertiary and secondary care settings.

Adolescents should actively participate in community programmes to build their life skills. Concerns have been raised by government and non-government organisations regarding the impact of unregulated population increase on societal evils, including reproductive misbehaviour and crimes. Introducing reproductive health education in schools and colleges can provide valuable evidence to young people. Amniocentesis, a legal method for determining sex, should be restricted due to the increased risk of female feticide. To promote reproductive health, adolescents during childhood should receive immunisations for human papilloma virus (HPV), tetanus, diphtheria, and whooping cough (pertussis) (Tdap), meningococcal disease (MenACWY), hepatitis A (HepA), hepatitis B (HepB), polio (inactivated poliovirus vaccine), measles, mumps, and rubella (MMR), and chickenpox (Varicella).

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