ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 07 | July - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ADOLESCENT HEALTH THROUGH THE LENS OF NEOTERIC ERA

Obstetrics & Gynaecology

Dr. Amrita Saha

KEYWORDS

Adolescent health:

Adolescent health is the range of approaches for preventing, detecting or treating young people's health and well being. Adolescence is a phase of transition from childhood to adulthood. It is during this period in one's lifetime their general ideas gets consolidated and certain habits, behaviors and skills are acquired that will have long term influence on the child's life. According to WHO adolescents are those people in age group 10-19 while youth belong to age group 15-24 [**1**].

With the ever largest adolescent population in the history of the world at 1.2 billion, the adolescent health in 21st century poses greater social and economic challenges than ever as this generation of adolescents will shape the future of nation. On a closer look nearly 90% of the adolescents live in low income countries where they are owing to poor family planning norms while about 10 % of the adolescents belong to High income countries. Due to better nutrition and overall adolescent health the age of puberty has went down significantly in most of high income countries along with higher average age of marriage. These countries boast better overall adolescent health. Interestingly in lower income countries where adolescents make up to a third of their citizens the topic of adolescent health is often undermined and overlooked.

Challenges such as adolescent pregnancy, early pregnancy, child prostitution, menstrual problems, prevalence of eating disorder leading to overweight, obesity or anemia are common in low income countries. While poverty and illiteracy significantly affect adolescent health the lack of behavior regulation and lack of course correction by parents often leads to destructive behavior like use of recreational drugs, bullying, sexual violence and running in with local gangs. Often it's seen that long term disorders stems in this age group like psychiatric illnesses, HTN etc. Due to high risk taking behavior, road traffic accidents rates are highest among adolescents in the world.

With the advent of digital era and peer pressure for commodities the adolescents today are more prone for online frauds and impulsive decisions that binds them in economic debt even before they start earning. It's well documented that human brain matures well beyond the teen year in mid 20s. In adolescence stage there exist a developmental lag between limbic system and prefrontal cortex. Pubertal maturation of limbic system which is complemented by newly developed sex hormone receptors leads to emotional volatility and impulsivity while delayed development of PFC involved in inhibiting inappropriate responses, planning and decision making leads to irrational decision making. This imbalance leads to high risk taking behavior engaged in rewards over rational decision making. Peer pressure is one of the major necessary evil that has plagued adolescents since ages. Adolescents are engaged in risk taking behavior despite knowing the risks.

Today media and internet poses an even greater threat to this problem known as super-peer. According to a study done in East Asian population media's influence on adolescents sexual health risk are equivalent to those posed by peers,school,families [**2**]. For the analysis of this study the data was acquired from various research papers by searches on Google Scholar, PubMed as well as articles published by credible news agencies. The articles which were searched around the keywords adolescent, mental health, teens, pregnancy, early marriage, STD, STI, Menstrual problems, behavior problems, substance abuse, drugs etc. Adolescent relevant articles were incorporated in the analysis for the purpose of finding current trends in adolescent health and their solutions. Areas of interest focused in this review article include psychiatric illnesses, substance abuse, sexual awareness, unmet needs of contraception, economic awareness, pregnancy and marriage trends as well as maternal mortality in adolescent.

Puberty trends:

While the downward trend in pubertal age began in 19th century in high income countries it stabilized in 1960 with mean age of menarche at 12-13 years. Recently a similar trend has been observed in lower and middle income countries [**3**]. There is a strong correlation between age of menarche and first marriage and first pregnancy in in these lower and middle income countries which can be tackled by staying in school [**4**]. There has also been an upward trend in age gap between puberty and parenthood from 2-4 years to 15-20 years. This is in response to industrialization, urbanization and length of education. Longer duration of adolescence is evident in all but the poorest of countries [**5**].

Trends in menstrual hygiene and sexual awareness:

Adolescent girls belonging to higher socioeconomic class have early onset of menarche while those involved in vigorous sporting activity had late onset of menses. Most common menstruation problem faced by adolescent girls is dysmenorrhea followed by pre-menstrual syndrome. Use of rags and old clothes during menstruation is major cause or reproductive tract infection. This trend is common in girls belonging to lower socioeconomic status.

Trends in maternal mortality:

Sub Saharan African countries have the highest maternal mortality rates in adolescent age group [**6**]. Maternal mortality is accountable for 1 in 8 death in young adults (15-24 years old) globally. While these girls account for 14% of total maternal mortality, only 11% of them deliver child. This is majorly due complications of abortion. Due the nature of un-wed pregnancy and associated taboos, pregnancy in these girls is often terminated at home or in untrained hands, when it comes to light at whatever fetal age not using proper aseptic methods.

Trends in STD:

With the rapidly changing sexual habits in adolescents belonging to lower and middle income countries and widening gap in age of onset of sexual activity and age of marriage, Prevalence of STD has gone up in adolescents. HPV infection that might occur after onset of sexual activity might have short term disease like genital warts or might develop into cervical cancer decades later. While treatable sexually transmitted diseases are most common in South Asia, South-East Asia, followed by sub Sahara region and Latin America, the HIV infection rate is highest in sub Saharan countries. HIV infection rate is also higher in adolescent females than adolescent males in endemic region [**7**]. In 2019, 1.7 million adolescents were living with HIV with 90% of them in WHO Africa region. While the downward trend in infection rate for HIV has been observed since 1994, still about 10% of new infections are in adolescents with three quarter in adolescent girls.

Trends in Infectious diseases:

With introduction of effective vaccination programs adolescent death and disability incidences from measles have fallen markedly. Diarrhea and Pneumonia are among the top 10 causes of mortality in 10-14 years age group. It's interesting to note that diarrhea, pneumonia and meningitis are among the top five causes of adolescent deaths in African lower and middle income countries.

Trends in overweight & obesity, under nutrition and nutritional anemia:

Overnutrition is another emerging public health concern in higher income countries and middle income countries especially in adolescent age group. Factors such as modern cultivation techniques meeting nutrition requirements, economic prosperity, trend for junk food and the digital civilisation have caused problem of overweight. About 1 in six adolescent is overweight globally with highest prevalence in Americas. According to WHO recommendation adolescents should target about 60 minutes of moderate to vigorous

physical activity, currently only 1 in 5 adolescent is able to meet this criteria. Physical inactivity is more common in adolescent females than in males. Iron deficiency anaemia was the second leading cause of years lost by adolescents to death and disability in 2016.

Trends in marital age:
Globally, including sub-Saharan Africa there has been observed a recent upward trend in mean marital age of females. However there exist great variation within the country where the rural community is typically having higher rates. Early marriage exposes young women for higher risk of maternal mortality and sexual and reproductive health risks. It also leads to loss of education opportunity and places adolescent girls at a higher risk of domestic violence especially in low income settings.

Trends in Teenage pregnancy, childbirth and contraception:
Early marriage in low-income settings put young women at heightened risk for Maternal mortality and health problems related to early pregnancy [**8**]. Adolescent females are more susceptible to obstructed and long labor subsequently leading to higher risk of postpartum infection and obstetric injury .11% of the childbirths in the world are attributed to females in age group 15-19 years. About 95% of these childbirths are given by adolescents girls living in low and middle income countries [**9**]. Since two decades there has been a downward trend in adolescent birth rate globally but in recent years this trend has slowed in sub-Saharan countries, South Asia Latin America and some Caribbean countries. Stillborn and neonatal deaths are 50% more common in adolescent pregnancy as is preterm and low birth weight. Contraceptive methods are useful in avoiding unwanted pregnancy its social consequences and unsafe abortion of pregnancy. Condoms is the most commonly used form of conception globally. While there has been observed and upward trend in use of contraception unmarried woman locally in the last two decades, the un-met needs of contraception remains high in sub-Saharan Africa 60%, South Asia 34% and West Asia 50%. In this age of about 40% of the pregnancy are unintended [**10**]. Number of induced abortion are highest in South and East Asia while Africa has the highest proportion of unsafe abortion. In unmarried sexually adolescents prevalence of contraception is at 25% in sub-Saharan region while it varies between 20 to 50% and Latin American countries. Reasons for not using contraceptive methods include risk of pregnancy, shyness, disapproving attitudes from provider and community is stigma about sexual activity etc.

Trends in substance abuse:
Increasing trend of Alcohol consumption among adolescents fueled by reasons such as peer pressure and as a source of relieving stress is a major concern among many countries [WHO] Current use of smoked and smokeless tobacco was 9.1% and 17.4% respectively among adolescents [**11**]. In large quantities it can inhibit self-control, promotes risky behavior, unsafe sex, drunk driving. More than one-fourth of all adolescents aged 15-19 years consume alcohol globally. In 2016, 13.6% adolescents were engaged in heavy drinking. Bringing alcohol is also associated with violence and premature deaths in adolescents it also leads to problems in later life and affects life expectancy. Cannabis is most commonly used drug by adolescents and 4.7% adolescents using it at least once in 2018. Recently solvent abuse is on an increasing trend in adolescents in India, it is closely associated with peer pressure, conduct disorder, psychosis and depression [**12**]. Smoking is on a downward trend in high income countries. Heroin and Opioid use remain very low in students.

Trends in psychiatric illness:
50% of all mental health illnesses in adults starts by the age of 14 in adolescents but most of these go undetected and untreated. Depression is one of the leading cause of morbidity in adolescents while suicide is the third leading cause of death in adolescent age 15 - 19 years. Mental health illnesses is accountable for 16% of the disease burden and injury in 10-19 years. There has been an upward trend of mental health illnesses in low and middle income families. In 10 to 24 years old globally nearly half of the non-fatal DALY is contributed by mental health illnesses along with substance abuse disorders [**13**]. In a study conducted in India 48% of the boys suffering from psychological and behavioral problems consulted with their friends or peers while only 63% of girls consult with their mothers about it. Age, class attendance family history of psychiatric illnesses and birth complications have been found to be a significant indicators of depression [**14**].

Trends in violence and injuries:
Globally interpersonal violence is a fourth most common cause of death in adolescent and young people. In one of the surveys done globally 42% of the adolescent boys and 37% of the adolescent girls were exposed to bullying. One in eight young people also reported sexual abuse. Violence in adolescents is also associated with higher risks of poor academic performance, STDs, early pregnancy, communicable and non communicable diseases. Unintended injuries are the leading cause of mortality and morbidity among adolescents worldwide. It is interesting to note that within these the road traffic accident is the most common cause of death among adolescent. Among these death most were pedestrians, cyclist or two wheeler users. A study done by Gracia-Moreno C suggests strong a strong relationship between adolescent injury and factors like domestic violence, unwanted pregnancy, unsafe sex, HIV and STI infection risk and rates of depression and self harm, suicide [15].

In young married couples in laws were main perpetrators of violence. Married adolescent women are most common victims of domestic violence, and forced sex by husbands [16]. Drowning is another one of the top causes of death among adolescents with more than 30,000 adolescents drowned in 2019, of these 75 % were boys. While young people comprise about 18% of the world population they are often the most neglected group in terms of specialized care while they are neither children nor adults, they are treated as one or other and this gives rise to some unique problems which are so frequent in this age group and are often overlooked and passed as acceptable. Though with the dawn of scientific methods and studies done on the subject it is becoming clearer what needs to be done to meet the needs of children in this transition phase to become adults.

In the history various projects for adolescent health issues have been made and enforced, some of them succeeded, some of them have made a dent while the rest have failed, and due to the fact none have addressed the problem at the grass root level. The main reason being the policies are usually made by lawmakers 40 years back than the current era .The world is evolving so are the problems hence policies should be reformed.

A social project that addresses the special needs of the current adolescent population should be brought on community level. In recent years this problem had been addressed and some breakthrough projects have been created that are successfully changing the lives of adolescents. One of them are Youth in Iceland, which helped push teens in Iceland off alcohol, from 42% in 1998 to 5% in 2016, further cigarettes smoking teens population fell from 23% to 3% and teens who have ever used cannabis fell from 17% to 7%. When the question arises why the teens start substance abuse? The answer is pretty much availability, high risk taking behavior, alienation, maybe some depression. But then another question arises why do they continue? The answer is to get high. So the question arises about threshold for addiction of substance abuse, these teens could have been on the threshold before they even took the drug as it was their style of coping that they were abusing. Milkman realized this problem early and in 1992 started Project Self-Discovery in Denver, offering teenagers natural-high alternatives to drugs and crime in form of learning music, dance, hip hop, art, martial arts etc.

The program asked addicted teens to stay 3 months some of them stayed 5 years. The probability of relapsed went down dramatically and the teens also learned some life skills. Thus proper research needs to be done in particular areas of adolescents Heath issues and then the policies and programs should be formulated that don't enforce but teach the teens to live a different life, moreover programs like Youth in Iceland needs to be implemented worldwide which focuses on prevention of abuse and asks parents to be more involved in life of their children and spend a set quality time in the family , get to know them their friends and the problems plaguing them to help build a better future for their children and next generation.

Education Systems:
There is much evidence that both the degree of school connection and quality of education affect health risks in adolescents. In particular, where girls are not treated equitably, they are more likely to drop out of school. So too, the acquisition of basic literacy and language skills in primary school is predictive of the timing of first childbirth and sexual health outcomes [17].

Community Strategies:

The people around adolescents exert influence on their behavior, frame of mind and social values. So local organizations, schools and government can entail the adolescents in constructive social activities that can shape their personalities in harmony with family and community.

Conclusion:

To conclude adolescents in India are facing problems of sexually transmitted infections, dysmenorrhea, tobacco and alcohol use, depressive problems, physical fights, worry, loneliness and oral health problems. Health education and counseling to adolescents are necessary in India to improve adolescence health. Primary care practitioners may act as a bridge between the family and adolescents to solve the problems. Simultaneously awareness to the programs related to adolescent health be generated among family members so that they can also advise and guide the adolescents.

REFERENCES:

1. Adolescent health, WHO.int.Adolescent health in the south-east Asia region.
2. Lou C, Cheng Y, Gao E, et al: Media's contribution to sexual knowledge, attitudes, and behaviors for adolescents and young adults in three Asian cities. J Adolesc Health 2012; 50:S26–S36.
3. Maternal, newborn, child and adolescent health, WHO 2013.Field E, Ambrus A: Early marriage, age of menarche, and female schooling attainment in Bangladesh. J Polit Econ 2008;116:881– 930.
4. Field E, Ambrus A : Early marriage , age of menarche , female schooling attainment in Bangladesh. J Polit Econ 2008;116:881-930.
5. Patton GC, Coffey C, Cappa C, et al: Health of the world's adolescents: a synthesis of internationally comparable data. Lancet 2012; 379:1665–1675.
6. Glasier A, Gulmezoglu AM, Schmid GP, etal : sexual and reproductive health : a matter of life and death . Lancet 2006 ; 368 :1595-1607
7. Santelli JS, Edelstein ZR, Mathur S, et al: Behavioral, biological, and demographic risk and protective factors for new HIV infections among youth, Rakai, Uganda. J Acquir Immune Defic Syndr 2013;63:393–400.
8. Glasier A, Gülmezoglu AM, Schmid GP, et al: Sexual and reproductive health: a matter of life and death. Lancet 2006;368:1595– 1607.
9. Maternal, newborn, child and adolescent health, WHO 2013.
10. Singh S, Sedgh G, Hussain R: Unintended pregnancy: worldwide levels, trends, and outcomes. Stud Fam Plann 2010;41:241– 250.
11. Patel D, Kassim S, Croucher R. Tobacco promotion and availability in school neighborhoods in India: a crosssectional study of their impact on adolescent tobacco use. Asian Pac J Cancer Prev. 2012;13(8):4173-6. PubMed PMID: 23098427.[PubMed].
12. Narayanaswamy JC, Viswanath B, Ravi M, Muralidharan K. Inhalant dependence: data from a tertiary care center in South India. Indian J Psychol Med. 2012 Jul;34(3):232-6. doi: 10.4103/0253-7176.106017. PubMed PMID: 23439435; PubMed Central PMCID: PMC3573573.[PubMed].
13. Gore FM, Bloem P, Patton GC, et al: Global burden of disease in young people aged 10–24 years: a systematic analysis. Lancet 2011; 377:2093–2102.
14. Kumar R, Prinja S, Lakshmi PV. Health care seeking behavior of adolescents: comparative study of two service delivery models. Indian J Pediatr. 2008 Sep;75(9):895-9. doi: 10.1007/s12098-008-0098-2. Epub 2008 Jun 25. PubMed PMID: 18581068.[PubMed].
15. Garcia-Moreno C, Watts C: Violence against women: an urgent public health priority. Bull WHO 2011;89:2
16. UNICEF: Progress for children. A report card on adolescents. New York, UNICEF, 2012.
17. Lloyd CB: The role of schools in promoting sexual and reproductive health among adolescents in developing countries. Soc Determ Sex Reprod Health 2010;113.