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Adolescent Today

Adolescent Health Academy

A Subspecialty Chapter of Indian Academy of Pediatrics

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: Theme :

Raising Environmentally Conscious Adolescents

"Catch Them Early Keep Them Safe"

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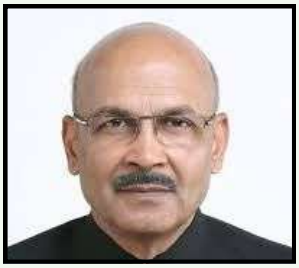

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Editorial

Dear friends,

"माता भूमिः पुत्रोऽहं पृथिव्याः"
"Mātā Bhūmiḥ Putro'ham Pṛthivyāḥ"
"The Earth is my mother, and I am her child."
— Atharva Veda (12.1.12)

Long before environmental conservation became a global movement, Indian civilization embraced nature as sacred. Trees such as the Peepal, Banyan, Tulsi, and Neem were revered not merely as plants but as symbols of life and well-being. Rivers were worshipped as mothers, mountains as abodes of divinity, and the five elements—Earth, Water, Fire, Air, and Space—as the very foundation of existence.

Our mythology further reflects this ecological wisdom, with many deities associated with animals and birds, reminding us that every living being has an essential place in nature's delicate balance. Respect for biodiversity and harmonious coexistence with nature have therefore always been an integral part of our cultural heritage.

Today, however, adolescents are growing up amidst unprecedented environmental challenges. Air pollution, climate change, biodiversity loss, water scarcity, plastic pollution, and extreme weather events are increasingly affecting their physical and mental health. Climate anxiety is emerging as a genuine concern as young people contemplate the future of the planet they will inherit.

Against this backdrop, the theme of this issue of **Adolescent Today—"Raising Environmentally Conscious Teenagers"**—is both timely and relevant. Our cover page (designed by Dr. Samir Shah) beautifully reflects this vision. A flourishing tree symbolizes our rich cultural heritage, while a sustainable city powered by renewable energy represents hope for the future. The image reminds us that the cities of tomorrow need not become lifeless concrete jungles; they can be vibrant, green, and environmentally responsible if guided by the choices we make today. The adolescents nurturing saplings in this landscape represent hope—the generation that will bridge tradition with innovation.

We are privileged to feature articles by eminent experts, including **Prof. H. Paramesh, Dr. Swati Y. Bhave, and Dr. Balachander,** who share valuable insights on environmental health and practical ways to inspire adolescents towards sustainable living. Their contributions reinforce the message that protecting the environment is inseparable from protecting health.

One of the most rewarding experiences during the preparation of this issue has been the overwhelming response to our **"Ask the Experts"** initiative, brain child of our Chairperson, Dr. Sushma Desai. Within just five days, we received over 90 thoughtful questions from parents, adolescents, teachers, and healthcare professionals across the country.

Dr. Rashmi Gupta and I, had the privilege of responding to the majority of these thoughtful queries, with valuable contributions from *Dr. Prashant Karia and Dr. Deepa Janardan.* While a carefully curated selection is presented in this issue, many more responses will be featured on the Adolescent Health Academy website, ensuring that this conversation continues beyond the printed pages and reaches many more adolescents, parents, and professionals seeking guidance.

As pediatricians, our responsibility extends beyond diagnosing and treating illnesses. We have the privilege of shaping behaviours, attitudes, and values that promote lifelong health. Every tree planted, every plastic bottle avoided, every drop of water conserved, and every environmentally responsible decision contributes to a healthier future for both adolescents and our planet. If we combine the timeless wisdom of our heritage with the innovations of modern science, we can inspire a generation that values sustainability, respects biodiversity, and understands that caring for the environment is caring for themselves. In raising environmentally conscious teenagers today, we are safeguarding not only their health but also the future of our planet.

Before concluding, I express my heartfelt gratitude to our Chairperson, **Dr. Sushma Desai,** whose vision, encouragement, and unwavering guidance inspired this initiative from its inception. My sincere thanks to our Honorary Secretary, **Dr. Shamik Ghosh,** for his constant support and encouragement. I also extend my appreciation to all our distinguished authors, expert contributors, reviewers, and the dedicated **Editorial Team,** whose enthusiasm, meticulous efforts, and commitment have made this issue possible.

Editorial Team
AT 2026

Chairperson's message

Dear Colleagues and Friends,

With heartfelt appreciation and deep gratitude for my Adolescent Today Team 2026, I feel truly happy and privileged to present the second edition of Adolescent Today, the quarterly journal of the Adolescent Health Academy (AHA), Indian Academy of Pediatrics. Our journal continues to serve as a vibrant platform for sharing evidence-based knowledge, practical insights, and innovative approaches to advancing adolescent health.

The theme of this issue, "Environment and Adolescent Health," is both timely and significant. Adolescents are uniquely vulnerable to the effects of environmental degradation, climate change, pollution, and changing lifestyles. As healthcare professionals, we have a responsibility not only to recognize these challenges but also to empower young people to become informed advocates for a healthier and more sustainable future.

I am delighted to bring together an outstanding collection of theme-based articles authored by eminent experts, including Prof. H. Paramesh, Dr. Swati Y. Bhave, Dr. Balachander, Dr. Narmada Ashok, and Dr. Aram Chenthil. Their contributions provide valuable perspectives on the impact of environmental factors on adolescent health and practical strategies to build resilience and environmental stewardship among our youth.

Beyond the theme, this issue features comprehensive reviews on transitional planning for adolescents with autism spectrum disorder, adnexal masses in adolescents, and the approach to chronic arthritis during adolescence—topics that reflect the breadth and complexity of adolescent healthcare. We are also pleased to include a thoughtful review of Ikigai for Teens, encouraging young readers and professionals alike to reflect on purpose, well-being, and personal growth.

Our regular features—including the Adolescent Talent Hunt, Ask the Experts, Spotlight on AHAians, and updates on upcoming activities and ADOLESCON 2026—highlight the Academy's commitment to academic excellence, collaboration, and meaningful engagement with adolescents across the country.

I extend my sincere appreciation to all the authors, reviewers, editorial team, and members of the Adolescent Health Academy whose dedication has made this issue possible. Your unwavering commitment continues to strengthen our collective mission of promoting holistic, evidence-based, and adolescent-friendly healthcare.

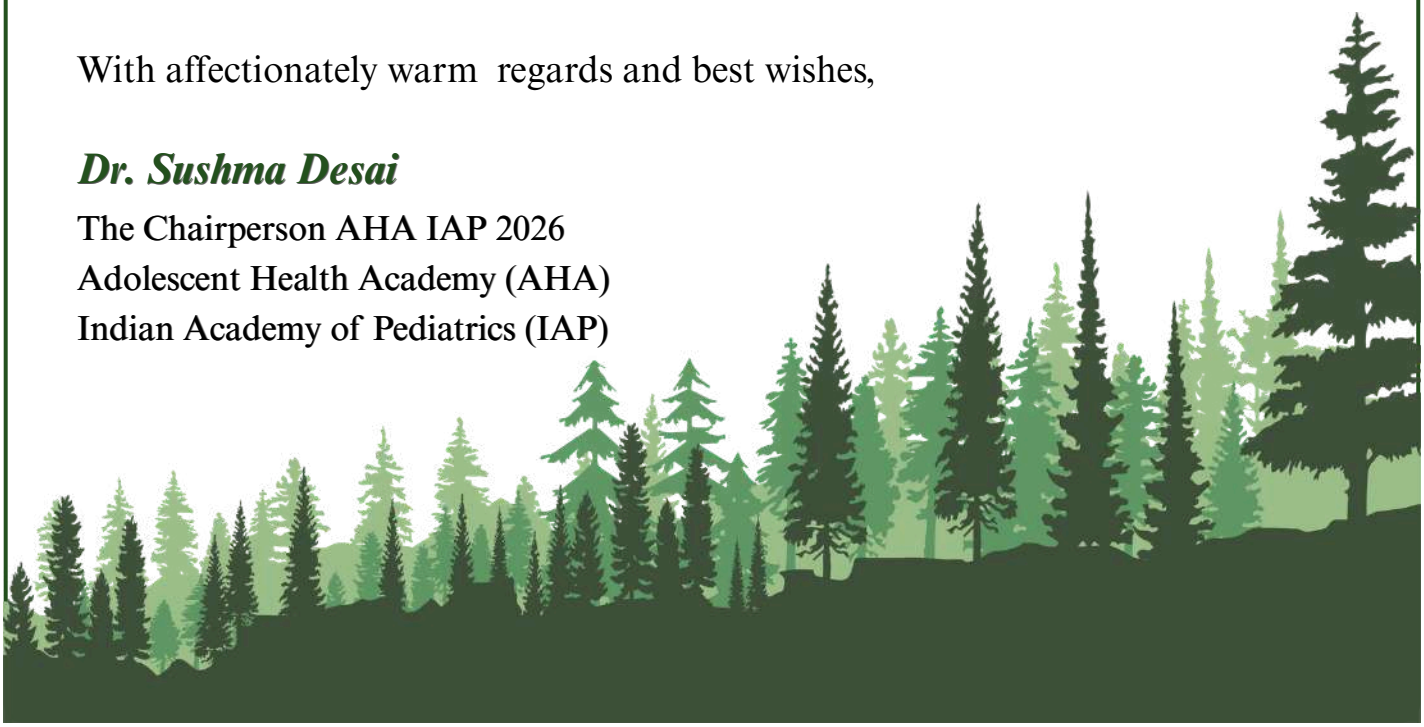
I take this opportunity to extend my sincerest gratitude to my team Adolescent Today 2026, under the leadership of very sincere and dedicated **Dr. Poonam Bhatia** , the creative editor **Dr. Samir Shah, Advisor Dr. Shubha Badami**, and the truly dynamic team members **Dr. Sonia Bhatt, Dr. Gowri Somyaji, Dr. Isha Singh , Dr. Shilpi Siddhanta and Dr. Ranjith** as well as **Dr. Amol Pawar**, for their truly amazing efforts to make the journal one of the master pieces!

I invite all our readers to engage with the articles, share your feedback, and actively participate in the Academy's educational initiatives. Together, let us continue to inspire, innovate, and advocate for healthier adolescents who will shape a healthier tomorrow.

With affectionately warm regards and best wishes,

Dr. Sushma Desai

The Chairperson AHA IAP 2026
Adolescent Health Academy (AHA)
Indian Academy of Pediatrics (IAP)



Message from AHA Honorary Secretary

It gives me immense pleasure to present the Second Edition of Adolescent Today, the official publication of the Central Adolescent Health Academy (AHA). With every edition, this publication continues to grow in depth, diversity, and purpose, reflecting our collective commitment to advancing adolescent health through knowledge, collaboration, and innovation.

Adolescent Today seeks to serve as a platform where scientific knowledge, practical experiences, and innovative ideas come together to inspire better care for adolescents across the country.

The theme of this edition, **"Environment and Adolescent Health,"** is both timely and significant. The environment in which adolescents live, learn, and grow profoundly influences their physical, mental, emotional, and social development. Climate change, air pollution, urbanization, environmental degradation, loss of biodiversity, unsafe living conditions, and the increasing frequency of natural disasters are no longer distant concerns—they are realities affecting the health and future of today's young people.

This edition is enriched by scholarly contributions from eminent members of our Environment Chapter, whose expertise and dedication have brought together a collection of insightful articles addressing these contemporary issues. Another highlight of this edition is the thoughtful review of **Ikigai for Teens,** a book that beautifully explores the concepts of purpose, resilience, emotional well-being, and personal growth among young people.

One of the greatest strengths of *Adolescent Today* lies in its ability to celebrate not only scientific excellence but also the diverse talents and achievements within our Academy. I am delighted that our regular features continue to flourish. The **Adolescent Talent Hunt** reminds us that every adolescent possesses unique abilities waiting to be nurtured and appreciated. By encouraging creativity, innovation, leadership, and expression, we strengthen the holistic development of young people.

The **Ask the Experts** section continues to provide practical, evidence-based answers to questions frequently encountered by healthcare professionals, parents, teachers, and adolescents themselves. This interactive feature bridges the gap between science and day-to-day practice, making reliable information accessible to all.

Readers will also find updates on upcoming academic activities, educational initiatives, workshops, conferences, and the much-awaited **ADOLESCON 2026**. These activities represent our shared vision of continuous learning and professional development. They also provide opportunities for networking, interdisciplinary collaboration, and the exchange of ideas that ultimately improve adolescent health services throughout India.

No publication of this quality is possible without the dedication of an exceptional editorial team. I take this opportunity to express my heartfelt appreciation to our sincere and highly dedicated **Chief Editor, Dr. Poonam Bhatia,** whose leadership, commitment to academic excellence, and meticulous attention to detail continue to guide this publication with distinction.

My sincere gratitude also goes to our exceptionally creative **Editor, Dr. Samir Shah,** whose innovative vision has given Adolescent Today its unique identity and engaging presentation. I extend my deepest appreciation to our respected **Advisor, Dr. Shubha Badami,** for her invaluable guidance, wisdom, and unwavering support throughout this journey.

I would also like to acknowledge the truly dynamic editorial team comprising **Dr. Sonia Bhatt, Dr. Gowri Somyaji, Dr. Isha Singh, Dr. Shilpi Siddhanta, Dr. Ranjith, and Dr. Amol Pawar.** Their enthusiasm, teamwork, editorial excellence, and tireless efforts behind the scenes have contributed immensely to the success of this publication. Every page reflects their dedication, creativity, and passion for adolescent health.

Above all, the guiding light of our Chairperson **Dr. Sushma Desai** serves to keep our focus on a qualitative expression of our creativity.

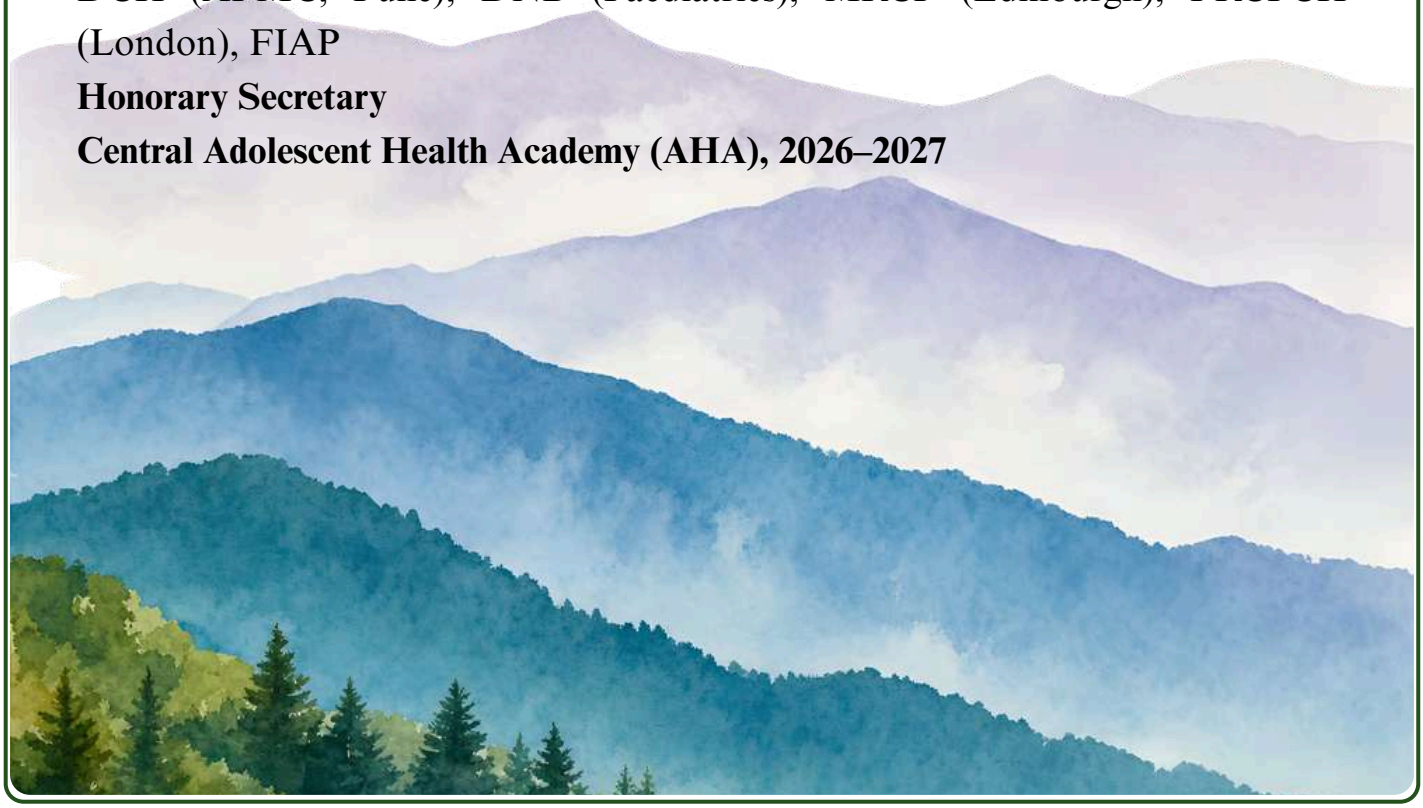
As we celebrate this second edition, we also look towards the future with optimism and determination. I firmly believe that Adolescent Today has the potential to evolve into a highly respected scientific journal of substance in the field of adolescent health.

This journey will require sustained scientific rigor, editorial excellence, multidisciplinary collaboration, and the active participation of every member of our Academy. **I warmly invite all AHAians to contribute** original research, review articles, case discussions, innovations, viewpoints, and experiences that will enrich future editions and strengthen our collective mission.

I congratulate the entire editorial team on this excellent second edition and extend my heartfelt appreciation to every contributor, reviewer, and reader who has made this publication possible. May this creative journey continue to grow, inspire, and ultimately transform into a scientific journal of enduring value and substance in adolescent health.

With the very best of wishes and kind regards,

Dr. Shamik Ghosh
DCH (AFMC, Pune), DNB (Paediatrics), MRCP (Edinburgh), FRCPCH (London), FIAP
Honorary Secretary
Central Adolescent Health Academy (AHA), 2026–2027



Environmental Pollution Impact on Adolescent Health

Prof. H Paramesh
Pediatric Pulmonologist and Environmentalist
Visiting Professor, Physician Scientist, Divecha Centre for Climate Change, Indian Institute of Science, Bengaluru

Introduction :

Our planet is 4600-million-years-old. Our environment is the mixture of living and non-living elements, having impact on human lives by way of supplying resources to us, in assimilating the waste we generate and helping in sustenance of life for good health for all, especially for children and adolescents.

According to data from the Lancet Commission on Pollution and Health of India, Air pollution is 70%; Water pollution is 20% and Soil and Chemical pollution is 10%.

Air pollution, global warming and climate change are interrelated. The human species is only 0.01% of the million species nature has created. The greed in humans has spoiled all Pancha Bhutas (elements) Air, Water, Sky, Fire and Earth. This has an impact on children and adolescents, directly on health, and indirectly through agriculture, water resources, inundation of coastal areas and diminishing cryosphere and mass of glaciers.

Adolescents and the Unique Vulnerability to Environment Pollution:

The adolescent population in India, as of National Institute of Health (NIH) data, is 253 million, representing 21% of country's population. One in five people are an adolescent of 15 to 19 years of age. Adolescents are uniquely vulnerable to environmental pollution.

	Child	Adolescent
1. Surface area	• Newborn 0.07 m^2 • Child 0.032 m^2	• 0.023 m^2
2. Soil consumption by hand to mouth behavior	• 400 mg / day	• 50 mg/day
3. Breathing zone	• Child (25cm) 60µg/cu meter 5 yr old	• 100 cm 30 µg/cu meter
4. Oxygen demand	• < 1yr 600L/kg/day	• 300-200 L/kg/day (12yrs)
5. Calorie need	• < 1 yr 100 cal/kg/day	• 40 cal/kg/day
6. Water need	• 160 ml/kg/day	• 50 ml/kg/day

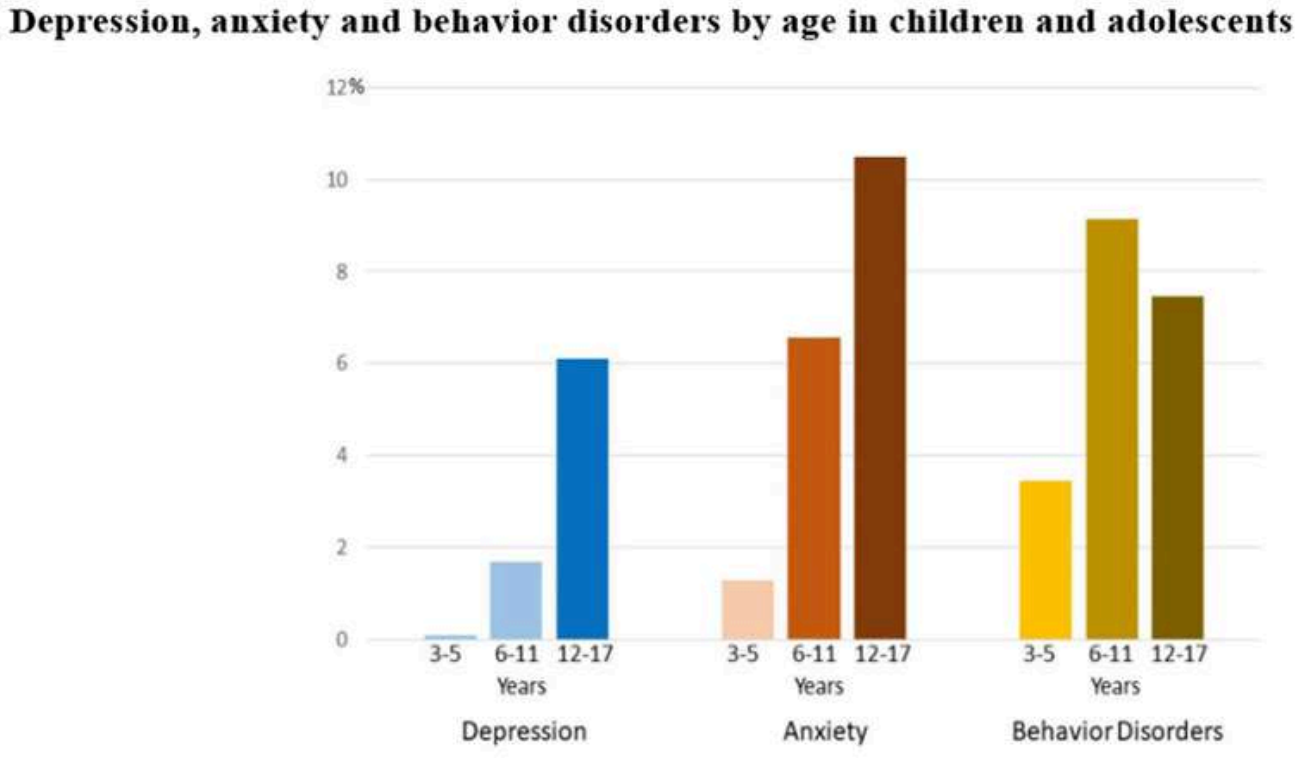
Our adage says "When boy gets mustache and girl gets prominent chest they can't see the ground. They will be autocratic and want others to be democratic". Adolescents are different from children in various issues as shown below in table – 1

Air pollution has an impact from Womb to Tomb :

Air pollutants less than 2 micron and water-insoluble gases like Nitrogen Di Oxide (NO_2) cross the lung layers, with small platelet aggregates at blood vessel mucosal layer, travel all over the body including brain, and damage the structure and functions of vital organs which has been proved by radioisotope studies.

Further, there are behavior problems on polluted days like increased crime rate, impaired judgement, worse test scores, reduced productivity, depression, decreased intelligence quotient and increased anxiety. [1]

The mental health issues like depression, anxiety and behavior problems are increased in adolescents as shown in graph -1 below



Source: Centre for Disease Control (CDC)

The newly recognized diagnosis is climate depression; climate anxiety is in vogue nowadays.

The recent adult brain development study in U.S.A where 10000 children between the age group of 9-10 years were followed up to 10 years with exposure to suspended particulate matter 2.5 to7 $\mu g/m^2$ and Ozone (O3) less than 60 parts per million (PPM) and MRI studies done with multiple air pollutants impact on neurocognitive development showed the altered brain structure and function especially in executive function, language and emotional regulation. The air quality index previously considered safe has negative impact on neurocognition. The mechanism is from neuro inflammation, neuro degeneration by suspended particles translocating to the brain. [2]

High Risk Behavior Problems in Adolescents :

Adolescents have high risk-taking behavior and want to explore the world. Young children in preambulatory period do not understand the danger, everything has to go to the mouth, while adolescents want to explore the world and exhibit high risk behavior.

For example, the tobacco smoking habit shows 41% of urban and 21.8% of rural adolescents in the age group of 10-17 yrs smoked their first tobacco. After 18 yrs the urban children overtake the rural children. The reasoning for smoking by 1500 participants varies like peer pressure in 29%, curiosity 18%, pleasure and fashion 16%, frustration 12%, status symbol 10%, to relieve tension 8%, concentration 5%, other reason 2% [3]

In U.S.A, on assessing the reasons for smoking: parental smoking, easy access to tobacco, peer behavior, low self-esteem, negative life experiences, mental ill health and substance use.

E-Vaping, a phenomenon rampant, is equally dangerous to health, producing parenchymal lung injury, increasing asthma severity and chronic obstructive pulmonary disease (COPD). As a matter of fact, any recreational inhalants have implications on respiratory physiology and lung injury like volatile solvents, dry cleaning fluid, paint thinner, aerosol solvents, air fresheners, keyboard cleaners, gases- ether, Halothane and Alkyl nitrates- locker room deodorants. [4]

Adolescent Violence is a major concern with conflict in law:

According to recent W.H.O data (May 8th, 2026), around 193000 homicides occur annually, globally from youth ages 15-29 years which is 40% of homicides globally.

For each young person killed, many more sustain injuries needing hospital treatment. When it is not fatal, youth violence has a serious, often lifelong impact on person's physical, psychological and social functioning. One in 5 girls and one in 7 boys experience sexual abuse.

For the past 5 years between 2022 to 2026 there were 4580 crimes committed by adolescents in the age group of 15-18 years like armed robbery, rape and murders. The reason for crime is:

1. Exposure to harmful content on mobile, social media and mobile games
2. Lack of exposure to moral, social values at home and school.
3. Easy availability of drugs
4. School dropouts
5. Criminal gangs trapping adolescents where stricter punishment is less by law.

We need to aim to prevent adolescent violence by building evidence on what works to prevent violence in adolescents. Strengthening school-based integration of evidence-based prevention strategies to adolescent violence and collaboration with international agencies and organisations to prevent adolescent violence globally.

It is the duty of all physicians who care for adolescents to spend time individually to council them on preventive aspects. Recommend to them strategies for wellness by balancing the mind, body, diet, lifestyle and exercise like yoga and maintaining the green spaces in our areas.

Observation shows that green spaces always promote healthy behavior, increase healing process, improve social contacts, give a sense of belonging and familiarity, and benefit the development of skills and capabilities, increase physical activities, mitigate potential harm while decreasing crime rate. They provide a good night sleep, because healing processes during the night from melatonin secretion from pineal gland inducing natural sleep with antioxidant effects. [5]

Prevention is better than cure is a concept from Ayurveda, mentioned in the Charaka Samhita 2000-2500 years ago. Allopathy came into existence around 16th century, focusing more on cure than care.

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2. ANN-Christe Duhaime MD Minding the climate-How Neuroscience Can Help Solve Our Environmental Crisis 2022
3. H Paramesh Pulmonary Clinics of India, Academy of Respiratory Medicine - June 2014 Pg 217-227
4. Anne E Reihman , F Holguin S Sharm Acute and Chronic Lung Disease from Recreational Inhalants Feb 2022 DOI: 10.1007/978-3-030-90185-1_7
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Raising Environment-Friendly Adolescents: Investing in a Greener Future

Dr. Swati Y Bhave

MD, DCH, FCPS, FIAP, FAAP. She is an internationally renowned Pediatrician and Adolescent Health Specialist. Executive Director of AACCI (Association of Adolescent and Child Care in India) and currently serves as the Head of Family Guidance and Child & Adolescent Wellness at the Jehangir Hospital Wellness Centre, Pune.

She is also Professor Emeritus, Department of Adolescent Medicine, Dr. D. Y. Patil Medical College, Pimpri, Pune. Dr. Bhave served as the Regional Vice President of the International Association for Adolescent Health (IAAH) from 2007 to 2013 and was a member of its Council during her tenure. She is widely recognized for her pioneering contributions to adolescent healthcare, medical education, and child and family wellness at both national and international levels.

"The greatest inheritance we can leave our children is not wealth, but a healthy planet and the wisdom to protect it."

Adolescence is a remarkable phase of life. It is a time when young people develop their identity, question established beliefs, become socially conscious, and begin making independent choices. The habits, attitudes, and values formed during these formative years often remain with them throughout adulthood. This makes adolescence the ideal period to nurture one of the most important values of the twenty-first century—respect and responsibility for the environment.

Climate change, air and water pollution, loss of biodiversity, excessive consumerism, and mounting waste are no longer distant concerns. They are realities that today's adolescents will inherit and confront throughout their lives.

While governments, industries, and international organizations play crucial roles in environmental conservation, lasting change begins at home, in schools, and within communities. Parents, teachers, healthcare professionals, and society share the responsibility of raising environmentally conscious adolescents who not only understand environmental challenges but also become part of the solution.

Raising Awareness:

As David Attenborough said "No one will protect what they don't care about; and no one will care about what they have never experienced."

Environmental education should begin with awareness. Adolescents are naturally curious and eager to understand the world around them. Instead of overwhelming them with alarming statistics, adults should help them appreciate the beauty and interconnectedness of nature. A walk through a forest, a visit to a wetland, bird watching, gardening, or simply observing seasonal changes can create a lifelong emotional connection with the natural world. Research has consistently shown that people protect what they value, and they value what they have experienced.

Role modelling:

We do not need millions of perfect environmentalists. We need millions of families making small, consistent, environmentally responsible choices every single day." Parents often underestimate the influence of their own behaviour. Adolescents learn far more from observation than from lectures. If parents separate waste, avoid single-use plastics, conserve water and electricity, carry reusable bags, use public transport when possible, and respect public spaces, these practices become normal for children. On the other hand, preaching environmental responsibility while wasting resources sends conflicting messages. Role modelling remains the most effective form of environmental education.

School environment :

Schools play an equally important role. Environmental science should not remain confined to textbooks and examinations. Students should actively participate in tree plantation drives, waste segregation projects, recycling initiatives, rainwater harvesting, kitchen gardens, biodiversity mapping, and energy conservation programmes. Project-based learning enables adolescents to understand that environmental protection is not merely an academic topic but a practical way of life. Schools should also encourage debates, innovation competitions, eco-clubs, and community service projects that promote sustainability.

Consumerism :

One of the greatest environmental challenges today is excessive consumerism. Adolescents are constantly exposed to social media influencers, advertisements, and peer pressure, encouraging them to buy more clothes, gadgets, accessories, and luxury items. It is essential to teach them the difference between needs and wants. They should understand concepts such as reducing consumption, repairing rather than replacing, reusing materials, sharing resources, and recycling responsibly. Sustainable living is not about deprivation; it is about making thoughtful and responsible choices.

Technology :

Can either contribute to environmental degradation or become a powerful tool for conservation. Adolescents should be encouraged to use technology wisely—to learn about climate science, participate in citizen science projects, monitor local biodiversity, calculate their carbon footprint, and spread awareness through creative digital campaigns. Social media, when used responsibly, can amplify positive environmental messages and inspire collective action.

Food habits :

These also influence environmental sustainability. Encouraging adolescents to avoid food wastage, appreciate locally grown seasonal foods, reduce excessive packaging, and understand the environmental impact of their dietary choices can significantly reduce their ecological footprint. Growing even a few herbs or vegetables at home teaches valuable lessons about nature, patience, and resource conservation.

Community involvement :

This strengthens environmental values. Adolescents who participate in neighbourhood cleanliness drives, river restoration activities, cycling campaigns, plastic collection programmes, or biodiversity conservation initiatives develop a sense of ownership and civic responsibility. Working alongside people from different age groups also teaches collaboration, empathy, and leadership. Environmental conservation is ultimately a collective effort rather than an individual achievement.

Healthcare professionals :

also have an important role. Paediatricians and adolescent health specialists can educate families about the health consequences of environmental degradation, including respiratory diseases due to air pollution, heat-related illnesses, waterborne infections, vector-borne diseases, and the mental health effects of climate anxiety. By linking environmental protection with personal health, young people appreciate that caring for the planet also means caring for themselves and future generations.

Prevention of eco-anxiety :

It is equally important to avoid creating fear or hopelessness. Many adolescents experience eco-anxiety after reading about climate change and environmental disasters. Adults should acknowledge these concerns while emphasising hope, resilience, innovation, and the power of individual and collective action. Every small action matters. Conserving electricity, planting trees, reducing waste, cycling instead of driving, protecting local biodiversity, and influencing friends and family all contribute to meaningful change.

Environmental responsibility and Life skills :

Adolescents who care for nature often become more disciplined, compassionate, patient, resourceful, and socially responsible. They learn to think beyond immediate gratification and appreciate the long-term consequences of their decisions. These qualities prepare them not only to become environmentally conscious citizens but also ethical leaders capable of addressing complex global challenges. The Earth does not belong to us; we belong to the Earth. The future of our planet depends on the values we nurture in our children today."

Ultimately, raising environmentally friendly adolescents is not about producing perfect environmentalists. It is about nurturing informed, responsible, and compassionate young citizens who recognise that humans are an integral part of nature rather than its masters. The choices they make today—how they travel, what they consume, how they dispose of waste, and how they influence others—will shape the health of our planet for decades to come.

As the well-known proverb reminds us, "We do not inherit the Earth from our ancestors; we borrow it from our children." Ironically, it is now our responsibility to educate those very children so that they can return this borrowed planet to future generations in an even better condition. Investing in environmentally responsible adolescents is therefore not merely an educational goal—it is one of the greatest investments we can make for the future of humanity.

Some memorable quotes :

Mahatma Gandhi" The Earth provides enough to satisfy every man's need, but not every man's greed."
Wangari Maathai (Nobel Peace Laureate) "It's the little things citizens do. That's what will make the difference."

Key Messages :

- The greatest environmental classroom is the home. Children learn more from what we do than from what we say.
- Environmental responsibility begins with small daily habits—switching off lights, conserving water, refusing single-use plastics, and reducing waste.
- Teach adolescents to be responsible consumers, not just successful consumers. Needs should always come before wants.
- A child who develops a love for nature is more likely to protect it for life.
- Every adolescent can become a climate champion. One informed young person can influence an entire family and community.
- Sustainability is not a sacrifice—it is a smarter, healthier way of living.
- The habits formed during adolescence often become the values of adulthood. This is the best time to nurture environmentally responsible citizens.
- There is no Planet B . Protecting the Earth is not an option—it is our collective responsibility.

Suggested reading :

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- Government of India. National Education Policy 2020.
- Government of India. Mission LiFE (Lifestyle for Environment).
- UNESCO. Education for Sustainable Development: A Roadmap. Paris: UNESCO; 2020.
- UNICEF. The Climate Crisis Is a Child Rights Crisis. New York: UNICEF; 2021.
- World Health Organisation. Climate Change and Health.

Effects of Environment on Teen Health

Dr. D Balachandar

- DCH, DNB, MNAMS, FIAP
- Secretary ECHG IAP 2021, 22
- National Chairperson ECHC 2025
- President Elect IAP Kerala 2026
- Senior Consultant in Paediatrics, Kerala Govt Health Service

Introduction - The Vulnerability of the Adolescent Population

Human activities have fundamentally transformed the global environment, resulting in a state of degradation that impacts the earth's primary systems: the geosphere, biosphere, cryosphere, hydrosphere, & atmosphere. This systemic disruption poses severe implications for both human & planetary health, with the adolescent population emerging as a uniquely susceptible group[1].

Because adolescents are in a transitional stage between childhood & adulthood, they are uniquely vulnerable to environmental hazards due to increased metabolic demands, hormonal changes, & behavioural patterns[2]. During this period, environmental exposures can have profound short-term & long-term impacts on health.

Major Environmental Hazards affecting Adolescents

1. Air Pollution : Air pollution remains one of the most significant environmental threats. Common pollutants include particulate matter (PM2.5 & 10), NO_2, SO_2, Ozone & CO. The effects on the body are asthma & allergic diseases, reduced lung growth, recurrent respiratory infections, increased cardiovascular risk & poor cognitive development.

2. Endocrine Disrupting Chemicals (EDCs) : Adolescents are increasingly exposed to EDCs, like Bisphenol A (BPA) (found in plastics & canned goods), phthalates, per & poly fluoroalkyl substances, pesticides & organo-tins (Tin-containing chemicals used in Industries). The health effects include early puberty, menstrual irregularities, obesity, thyroid dysfunction, infertility in later life & metabolic syndrome. EDCs are linked to PCOS by altering androgen synthesis & stimulating adipocytes. Higher levels of BPA have been found in the plasma & follicular fluid of women with PCOS compared to healthy controls.[3]

3. Climate Change and Heat Stress : Currently, the world is already 1.1°C warmer than pre-industrialisation levels, with expectations that this could rise to 1.5°C by 2030 and potentially up to 3.5°C by the end of the century if CO_2 emissions continue their current growth rate[1]. Direct Impacts: Disasters like landslides or floods lead to loss of shelter, malnutrition & increased risk of infectious diseases.

Social Hazards: Climate-related economic shocks increase risks of child marriage, school dropout & gender-based violence. Girls in low-income settings are particularly at risk of being removed from school to support families after a disaster. Psychological Stress: Events can trigger Post-Traumatic Stress Disorder, anxiety & a sense of insecurity about the future[2].

4. Water Pollution : India currently ranks 120 out of 122 countries in terms of water quality, with 70% of freshwater sources found to be contaminated by landfills, septic tanks, fertilizers, & untreated sewage[1].Unsafe drinking water & contamination with industrial waste expose adolescents to toxins like lead, arsenic, mercury & microplastics. The health impacts vary from gastrointestinal diseases, neurological impairment, growth retardation & renal damage.

5. Noise Pollution : Chronic exposure to loud environments produces effects ranging from sleep disturbances, anxiety, poor concentration, hearing impairment & reduced academic performance. Noise pollution from industries, vehicles & high-volume electronics can cause permanent hearing impairment.

6. Plastic and Microplastics Exposure : Plastics have become unavoidable in food packaging & water sources. The potential effects are hormonal imbalance, gut microbiome alterations, chronic inflammation & reproductive health concerns.

7. Lifestyle and Nutritional Environment[2] : The "built environment" & modern dietary habits significantly contribute to the rise in childhood obesity, a chronic disease impairing long-term health.

JUNCS Diet: High consumption of Junk foods, Ultra-processed foods, Nutritionally inappropriate foods, Caffeinated/colored beverages & Sugar-sweetened beverages.

Physical **Inactivity**: A lack of public grounds & gardens, combined with academic stress & increased screen time, reduces physical activity.

Contaminants: There is a striking increase in food & water contaminants due to altered food habits.

8. Digital Environment as an Emerging Hazard : Modern technology introduces both behavioral and physical environmental hazards. **E-waste:** Electronic waste is the fastest-growing solid waste stream globally. Improper recycling or dumping through open burning releases hazardous substances like lead, which is particularly toxic to children & pregnant women. Though not a classical environmental hazard, **digital overexposure/ mobile addiction syndrome** has become a major health issue. The **effects** being sleep deprivation, sedentary lifestyle, social isolation, screen addiction **(4S)** & anxiety and depression[4]

Special Vulnerabilities in Adolescence[1]

Adolescents are particularly susceptible to environmental problems because of rapid hormonal changes, developing brain and reproductive systems, increased outdoor exposure, risk-taking behaviours, peer influence & nutritional demands.

Physical Stature and Physiology: Because they are shorter than adults, they are closer to ground-level vehicle emissions and toxic gases. Additionally, their higher BMR & respiratory rate mean they inhale more toxic gases relative to their size.

Developmental Windows: Adolescents undergo significant sexual, cognitive & psychosocial changes, making them more vulnerable to EDCs leading to premature puberty, reproductive disorders & developmental defects[3].

External Exposures: Environmental hazards often start in the womb & can have lifelong effects including developmental defects & cardiovascular issues.

Socio-Economic and Educational Impacts: Beyond health, environmental degradation threatens the social fabric of an adolescent's life.

Education Barriers: Climate change could prevent more than 12 million girls from completing their education annually by 2025. In regions like the Sahel (Africa), environmental stressors put over 80% of adolescent girls at risk of school dropout, child marriage & early pregnancy[4].

Displacement and Conflict: Climate-related disasters have doubled over the past two decades, leading to forced migration, separation from families, and an increased risk of child labor and trafficking[4].

Long-Term Consequences

Environmental exposures during adolescence may lead to adult infertility, chronic respiratory diseases, cardiovascular disorders, cancers, neurodevelopmental disorders, mental health disorders, obesity/metabolic disease, impaired growth, earlier puberty & reproductive problems & even increased cancer risk in adulthood.

Prevention and Solutions

@ **Individual Level** - Encourage healthy eating, reduce plastic use, promote physical activity, limit screen time & use protective gear in polluted environments.
@ **Family Level**- Safe food storage, reduce indoor pollution & avoid unnecessary chemical exposure
@ **School Level** - **Environmental Education:** Teenagers should be encouraged to adopt "climate champion" behaviours, such as using bicycles, reducing plastic use & segregating waste. Providing clean drinking water, sanitation, **green campus initiatives.**

@ Health Professionals level We are urged to incorporate **"Climate-Sensitive Health Counselling"** (CSHC) into routine care, screening for environmental risks and food insecurity as part of standard adolescent health assessments.

@ Community and Policy Level- Air quality monitoring, ban harmful chemicals, improve waste management & strengthen climate policies. In response to the crises, adolescents worldwide are leading social movements, such as "Fridays for Future", to demand that political leaders transition from fossil fuels to renewable energy. India has committed to meeting 50% of its energy demand from renewable sources & aims to achieve net zero emissions by 2070.

Final mitigation requires an understanding of the Carbon Footprint—a measure of total greenhouse gas emissions generated by an individual's lifestyle like transportation choices, dietary patterns, energy consumption, and waste generation. Reducing this footprint is essential for ensuring adolescent health and long-term planetary stability.

Conclusion

Effective management requires a comprehensive Environmental history-taking approach to identify these multifaceted risks[5] through HEEADSSS Format and the "Green Page": A WHO record used to document environmental exposure history. Environmental hazards are silently shaping adolescent health and future adult disease burden. Awareness, early interventions, and policy changes are essential to protect this vulnerable age group. *And it is high time to introduce one more E (Environment) in the HEEADSSS format.*

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Climate change and adolescent health

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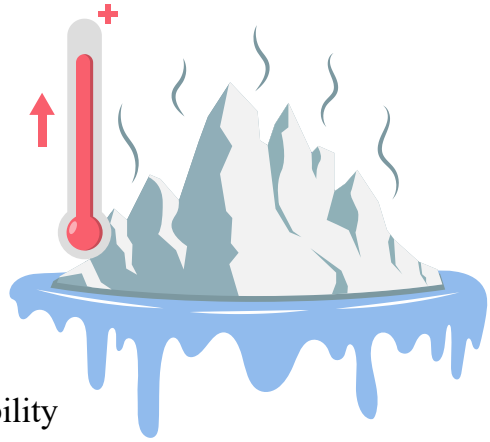
Introduction:

The health threats posed due to the unprecedented climate change that has raised the annual temperatures by 1.5°C more than the pre-industrial times have destabilized our entire ecosystem. With adolescents representing more than 16% of the global population, they experience far greater climate related problems. They are simultaneously the vulnerable victims and powerful agents for change. UNICEF's Children's Climate Risk Index reveals that our planet is becoming a more dangerous place to live with increasing catastrophic droughts, fire and floods.

The key climatic changes that affect adolescence are :



1. Heat waves
2. High intensity cyclones
3. Riverine flooding as glaciers is melting and increased precipitation due to higher water content in atmosphere
4. Coastal flooding with rising sea levels
5. Water scarcity due to severe seasonal and interannual variability
6. Increase in vector borne diseases
7. Air pollution due to fossil fuel combustion
8. Lead pollution due to exposure to contaminated air, soil and food.

Impact of climate change on health : The impact of climate change is myriad

Especially in adolescent age group the impact is on the following areas

1.Physical health: Adolescents are exposed to extreme heat as they are the population that have the need to be outdoors for their studies and physical activities. The extreme heat can lead to heat exhaustion, stroke, dehydration and kidney injury. The famous adolescent climate activist from Zimbabwe, Nkosilathi Nyathi asked the World leaders how he can be expected to attend school 'under a scorching sun'

2.Respiratory diseases: The change in the climate can lead to changes in the pollination and air pollution significantly contributes to increase in particulate matter 2.5. The wildfires and ozone layer disturbances also jointly contribute to increasing incidence of respiratory diseases like allergic rhinitis, airway inflammation and increased respiratory infections.

3.Increase of waterborne and foodborne infections: WHO data indicates 2 billion people lack safe drinking water and climate stressors heighten the risk. This leads to increase in the water and foodborne infections – diarrhea, hepatitis, typhoid etc.

4.Increase in vector borne diseases : The changing climatic conditions affect the risk of transmission of vector borne diseases. The average climate defined transmission potential of dengue by Aedes albopictus and Aedes aegypti increased by 48·5% and 11·6%, respectively, from 1951–60 to 2015–24, at least partially contributing to the 7·6 million dengue cases reported globally in early 2024.

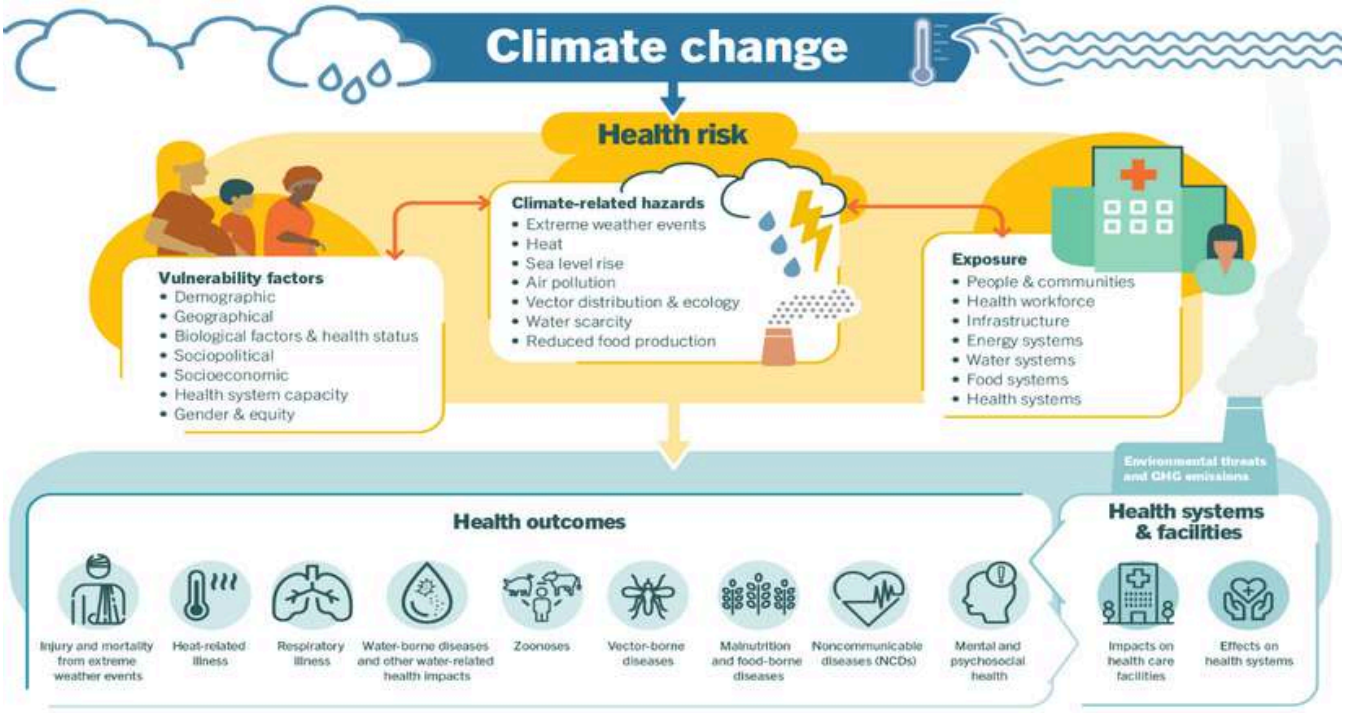
5.Reproductive health: Climate related concerns may lead to individuals to make choices that can impair their sexual and reproductive health

- Risk of contracting HIV may increase due to survival strategy of people living with food insecurity.
- Climate related events can lead to displacement leading on to early marriages and domestic violence
- Exposure to increasing ambient temperatures leads to high risk of preterm birth and premature rupture of membranes
- Increased ambient temperatures correlate with poor sperm and semen parameters affecting male reproductive function
- Air pollution is a well-established risk factor for impaired fertility and pregnancy complications worldwide
- Air pollution can cause DNA damage or impair DNA repair mechanisms exhibiting genotoxic effects.

6.Mental Health: Increasingly documented impact climate change is eco-anxiety which refers to mental distress or chronic fear associated with environmental conditions. This leads to anger and fear, powerlessness, helplessness and trauma. One of the important phenomena is Solastalgia which is emotional or existential distress caused by environmental changes within the home environment.

The key characteristics are – the ‘home’ factor – pain of witnessing your present, immediate environment deteriorate while still living in it, powerlessness over large scale anthropogenic changes, anticipatory grief over the expected environmental destruction in the future.

7.Social consequences: Climate change causes school closures, interrupted education, reduced concentration, increased absenteeism, child labor and school dropouts.

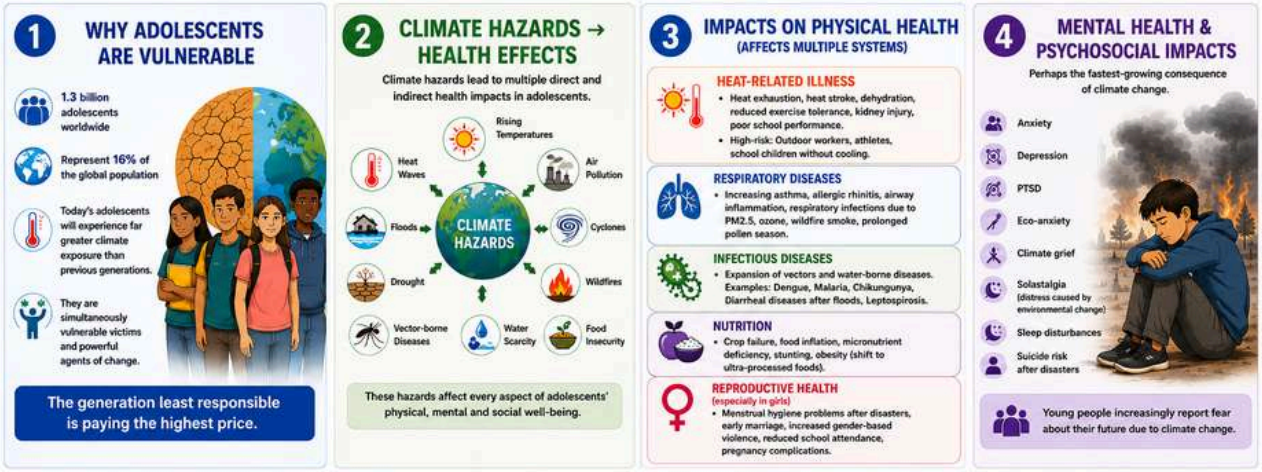


Source: https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health

Need for urgent actions:

To avert the catastrophic health impacts on adolescents we need urgent action to limit the temperature rise to 1.5°C. The action should involve individuals, organizations and government. WHO has identified three main objectives to counteract climate change.

1. Promotion of actions that both reduce carbon emissions and improve health with rapid and equitable transition to clean energy economy
2. Build better more climate resilient health systems that will be the central components of urban health and primary health care by supporting health systems to use more reliable and cleaner solutions, decarbonize high emitting health systems.
3. Assessment of health vulnerabilities and developing health systems which integrate climate risk and implement climate informed surveillance and response systems for key risks, such as extreme heat and infectious diseases.



Role of Pediatricians :

Pediatricians have got a major role in contributing to health and well-being of adolescents. The following are some of the contributions that can be made by us.

- Screen for climate-related illnesses
- Counsel families
- Promote vaccination and nutrition
- Recognize eco-anxiety
- Encourage physical activity with heat precautions
- Advocate for clean air and child-centred climate policies
- Build climate-resilient paediatric services

Conclusion :

Climate change has emerged as one of the defining public health challenges of the twenty-first century, with profound and far-reaching consequences for adolescent health. Adolescence represents a unique developmental window characterized by rapid physical growth, neurocognitive maturation, hormonal changes, and the establishment of lifelong health behaviours. Environmental disruptions during this critical period have the potential to influence not only immediate health outcomes but also adult health, educational attainment, economic productivity, and intergenerational well-being. The climate we protect today will shape the health of every adolescent tomorrow. Climate action is therefore not only an environmental responsibility—it is one of the greatest investments we can make in the health, equity, and future of the next generation.

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Empowering Adolescents for a Sustainable Future

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Contributions to : * IAP Book on Standard Treatment Guidelines, * IAP Textbook on Adolescent Medicine, * IAP Book on Preconceptional Care

What is the Environment of an Adolescent ?

The Immediate physical and social surroundings of the Adolescent, which interact with each other to influence his/her Health.

The Physical Environment has two parts – The **"Micro Environment"** includes the House of living, attending School & Workplace if any. The **"Macro Environment"** is the city, town, village or the Geographical area of living.

The Social Environment contains of the dynamic day to day circumstances of living and existing regulations in the place. The Digital Environment is the most influencing environment for the Adolescents.

What are the issues that exist in our Environment ?

"Be pure in Mind. That is Everything. Rest is pompous show" - Saint Thiruvalluvar

If you have an unpolluted mind, no external pollution happens. So, mindlessness is the reason for increasing pollution & climate change on our Home – Planet Earth. Of course, increased industrialisation, Transport, Using Fossil fuels have lead to Air, Water, Food & Chemical Pollution which affects the growing Child & Adolescent.

Air Pollution in the outdoor due to Large Factories, Gas stations, Natural disasters, Highway Vehicles, Biomass fuels can produce Asthma, Allergic Rhinitis, COPD, Lung Function Decrements, Leukaemia etc.

Indoor Pollutants like Stain repellent carpets, fabrics, polishes, furniture, Freshners, Shampoos, Soap lotions, Deodorants, Antiperspirants, Hair straighteners can produce Fatty liver, immunotoxicity, Asthma, eye irritation, reduced thyroid & testosterone levels.

Smoking & Vaping is increasing in Adolescents due to Risk Taking Behaviour which leads to School Absenteeism, Respiratory disorders, Pneumonia, uncontrolled Asthma, Altered Neurodevelopment, Vaping Associated Lung Injuries(EVALI).

Water Pollution due to Microorganisms cause Hepatitis, Typhoid, etc.

Heavy metals like Lead, Cadmium, Arsenic, Mercury, Endocrine Disruptors like Perchlorates, Bisphenols, Phthalates, Phytoestrogens, Triclosan & E-Waste including Computers, Monitors, Video cameras, TV, Household Appliances, Electronic devices produce varied effects on Adolescents.

What are the effects of Digital Over usage?

Social media Influence has increased after Covid due to increased Online activity. Cyber safety awareness lacks among Adolescents & Parents. Due to adventurous nature, high technology quotient & easy internet access Adolescents are vulnerable. Unregulated exposure online leads to issues like Cyberbullying, Cyber stalking, Photo morphing etc.

Understanding the Problems as Gatekeepers

- Detailed Environmental history taking to elicit Exposure to hazards & pollution that contribute to the present illness.
- HEEADSSS – Psychosocial history taking can include another E – Environment.
- Influence & spread awareness on social media on the connection between environmental pollution & Adolescent health.
- Awareness campaigns in Schools, Colleges, Public forums to Students, Teachers & Parents & Public about Environmental issues affecting Adolescents.

How to raise Conscious Adolescents?

The period of Adolescence is when values turn into action.
If we want a generation that respects the planet, we need to help Adolescents connect the dots between their choices and the environment.

Start With "Why", Not Just "What"

Teens needs space, not lectures.
Instead of "don’t waste water," link it to things they care about.

Gaming analogy: "You wouldn’t let your phone battery drain to 0% for no reason, right? Earth’s resources are the same."

Money angle: Show how energy-saving habits to cut electricity bills so that more pocket money will be available for them.
Future focus: Climate change will impact their jobs, travel, and lifestyle in 2050. Make it personal.

 # Give Them Ownership, Not Orders

Adolescents crave independence. Invite them to lead.

Have a home Audit: Ask them to track the house's plastic waste for a week and suggest one change.

Family eco-challenge: The one who takes the shortest showers will pick Friday's movie.

Passion projects: If they love fashion suggest thrifting & upcycling. If they love tech let them research e-waste recycling. Meet them where their interests lie.

 # Make It Social & Visible

We know that for Adolescents, peer influence is greater than parent influence.

Encourage Green groups: School eco-clubs, Surroundings like Beach clean-ups with Friends, Instagram reels on Do it Yourself (DIY) composting.

Normalize it: Share stories of young activists like Greta Thunberg or India's Licypriya Kangujam. Show that age is not a barrier to take initiatives. Only ideas matter.

Family branding: Create a fun family hashtag for your eco-activities. Teens love content they can share.

 # Practice What You Preach, but Admit When You Slip

Hypocrisy kills credibility. If you forget your cloth bag, say that: "I messed up today. Let's remember next time."

It teaches that sustainability is a journey, not a test of perfection.

 # Connect Them to Nature Directly

You can't protect what you don't love.

Micro-adventures like Terrace gardening, weekend treks in Coimbatore's Western Ghats, Stargazing. Skill building like teaching to cook with local, seasonal veggies. That's climate action on a plate. Digital detox practice with 1 hour outside equivalent to 1 hour less screen energy used.

The Goal for the Adolescents is to come out from Guilt to taking ownership of their actions. We should not raise Teens who feel guilty about the planet. We should raise teens who feel powerful enough to heal it. Small consistent actions can bring great changes.

Another way to involve Adolescents is empowering them by asking them like "If you were in charge of making the family 10% greener this month, what's the first thing you'd change?" They actually will do it.

Building Positivity in thoughts, words & action. Consistent Efforts by everyone in their small way can make a larger impact on the Environment. Let us hope for the best. Let us make it happen!!

Transition planning in adolescents with autism spectrum disorder

Dr. Leena Deshpande

A Consultant Developmental Pediatrician with over 25 years of experience, including a decade in the UK. Founder of iCAN Child Development Centre, she is a national leader in Developmental & Behavioural Pediatrics, serving as Academic Editor of the IAP Handbook of Developmental & Behavioral Pediatrics, Associate Editor of the Indian Journal of Developmental and Behavioral Pediatrics, National Coordinator of the IAP Fellowship in Developmental & Behavioural Pediatrics, and faculty on several national academic forums.

Over the last two decades, we have come a long way in autism care in India. There has been a massive collective effort, both by individuals and through initiatives like IAP's Autism Awareness programs. Today, we are picking up early red flags and referring early to the right professionals. We have learnt how to counsel and support families through these early years.
But now, those preschoolers have grown up.

They are entering adolescence, a phase that is challenging for any individual. For our neurodiverse adolescents, who struggle with transitions and thrive on routine and predictability, this period can feel quite overwhelming.

In adolescence along with physical growth and hormonal changes, social demands and expectations increase. For our adolescent with autism, this transition is particularly unnerving.

At the same time, parents start worrying about the future and the dreaded question 'what will happen after me?

This is where we, as Pediatricans and Developmental Pediatricians, need to shift gears from early intervention to supporting the families in planning the future.

In India, many adolescents continue with Pediatricians till 18 or even 21 years. The eventual shift to an adult physician can feel like being handed over to a stranger.

Transition planning is not something that begins at 18 years. Ideally, we should start gradual transitions between 12 and 15 years of age.

We know there are so many layers in autism, hence transition will also need to be done in steps.

A smoother approach is introducing to adult care slowly, with a period of overlap. This will allow time for trust to develop, making transition less stressful for the adolescent and their family.

The Medical Transition

A child with autism may have cooccurring medical conditions like epilepsy, gastrointestinal issues, obesity or sleep problems which may persist or worsen in adolescence

Mental health concerns especially anxiety and depression can be at its peak in this phase and may present as behavioural issues. Pubertal changes, menstrual hygiene, personal safety, these are not a onetime conversation.

Discussions have to start much early, around 8 to 10 years of age, tailored according to the child's understanding capacity. Visual supports and social stories can be very helpful.

Communication level

The functional levels or severity of autism is most closely linked to the communication ability of the child. Children who are 'minimally verbal' need the most support as they grow up. Hence all efforts to help functional communication including use of Augmentative and alternative communication, should start from early childhood and continue through adolescence.

Academic Transition and Vocational Planning

Early school years provide structure, routine and predictability. But as the child grows older, there needs to be a shift in the mindset.

We often focus heavily on academics, but in the long run, functional independence matters more than marks on a report card.

In India, we are slowly seeing increasing options. Individualised education program, academic accommodations through education boards and NIOS board curriculum can help.

At the same time, it is the real-life skills which help build independent living. Teaching our adolescent to take care of personal hygiene, handling money, communicating their needs, traveling short distances are the kind of skills which need to be built parallelly along with academics from early on.

Further on vocational training programs, sheltered workshops and skill-based employment in sectors like data entry, hospitality, packaging can be explored based on the adolescent's strengths and abilities.

Navigating the System:

Paediatricians can play a crucial role in helping families navigate the various available resources and support systems which the child is eligible for. Families often need guidance with Disability certification, UDID card, legal guardianship, and educational accommodations.

Support groups, parent networks, and emerging community living models are gradually expanding and offer hope. The concept that individuals with autism can live semi-independently within supportive environments is slowly gaining acceptance.

If we start early and plan thoughtfully, it will smoothen the process and help them move towards a life of dignity, independence and inclusion.

Adnexal Masses in Adolescents

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An adnexal mass derives from the ovary, tube, or broad ligament. These lesions may present with associated symptoms or signs or be identified through imaging studies. Most are physiological cysts or benign tumors, but malignancy risk is higher than adults. Fertility preservation is crucial at this age. Early diagnosis is necessary to reduce the risk of ovarian torsion and to improve the prognosis for malignant neoplasms. [1-4]

Clinical presentations:

Adnexal masses may be incidentally detected on imaging for a different complaint or present with following symptoms. They depend on size and pathology

- Abdominal pain: it is the commonest presenting symptom occurring in around 45-80% patients. [5]
- Palpable abdominal or pelvic mass
- Symptoms related to compression of other organs like frequent urination, constipation, pelvic pressure.
- Bloating or increasing abdominal girth
- Precocious puberty or virilization
- Paraneoplastic or autonomic symptoms

Causes of adnexal mass

1. **Ovarian-** Most ovarian masses in adolescents are physiologic ovarian cysts or benign ovarian tumours
    1. **Functional / Physiological:** Follicular cyst, Corpus luteum cyst
    2. **Benign Neoplastic:** Mature cystic teratoma or Dermoid cyst (most common), Serous cystadenoma, Mucinous cystadenoma
    3. **Malignant:** Germ cell tumours (most common malignant group), Dysgerminoma, Yolk sac tumour, Immature teratoma, Epithelial tumours, Sex cord stromal tumours

2. **Non-ovarian Causes:** Tubo-ovarian abscess, Para ovarian cyst, Ectopic pregnancy, Hydrosalpinx, pyosalpinx, Metastatic disease to the ovary

3. **Other Causes:** Reproductive tract anomalies, Urinary tract disorders, Gastrointestinal tract disorders, Other pelvic structures, Appendicular mass

Evaluation of ovarian masses: Patients may come with acute severe abdominal pain or chronic symptoms.

Patients with acute severe abdominal pain need urgent evaluation. Causes may be ovarian torsion, ruptured haemorrhagic cyst or neoplasm, acute appendicitis, ectopic pregnancy and tubo-ovarian abscess. Guarding, tenderness and rebound tenderness may be present. CBC, CRP and urine β HCG, pre- operative investigations and urgent ultrasound will lead to diagnosis.

Tubo-ovarian torsion pain is acute, unilateral and associated with vomiting and tachycardia. It is more common on the right side. Transabdominal ultrasound shows unilateral ovarian enlargement and oedema. The ovary may have an ill-defined border and there may be peripheral arrangement of the follicles. Abnormal Doppler signals in the ovarian vessels, with either absent peripheral blood flow or coiling of ovarian vessels in subacute cases. Treatment involves laparoscopic surgery. Detorsion with or without cystectomy, even if the ovary looks necrotic. Oopheropexy may be performed to prevent recurrence. Figure1

Patients without sever abdominal pain: Evaluation involves obtaining history of age at menarche, LMP, menstrual history, dysmenorrhea, pubertal development, pain characteristics, sexual history, constitutional symptoms and family history of breast/ ovarian cancer. Systemic examination for lymphadenopathy, breast examination, pleural effusion and abdominal examination for characteristics of mass, ascites, signs of sexually transmitted infections. signs of precocious puberty should be sought. Vaginal examination should not be performed in girls who are not sexually active.

Transabdominal ultrasound is first line imaging modality. See for size, consistency, laterality, associated features like ascites and doppler findings. Ovarian masses can be broadly classified as simple cysts, complex mass or solid mass. Presence of any of M features of IOTA classification (irregular solid mass, ascites, papillary structures at least four, irregular solid tumour >100cm diameter and low resistance abundant doppler flow) should be further investigated with MRI/ CT scan and tumour markers.

Lab investigations involve urine for pregnancy, testing for STIs, tumour markers in suspicious masses, and cytology of ascitic fluid. Platelet count may be raised in malignant tumours. Common tumour markers are Alfa fetoprotein, HCG, LDH, CA 125, estradiol, and androgens. [3] Raised tumour markers are strong predictors of malignancy.

Management :

Simple ovarian cysts: Cysts up to 5 cms can be managed conservatively. Scan should be repeated after 3 months for resolution. Cysts between 5-7 cms need ultrasound surveillance or laparoscopic cystectomy if symptomatic. Cysts more than 7 cms, persistent cysts or suspicion of malignancy require laparoscopic cystectomy.Haemorrhagic cysts should be rescanned after 6-8 weeks for resolution. Figure2

Complex ovarian masses should be evaluated with MRI/CT and tumour markers. Most are benign. Mature cystic teratoma (Dermoid cyst) is a common complex cyst in adolescent girls. If more than 5 cms, it requires laparoscopic cystectomy with ovarian conservation. Surgeon performing laparocopy in adolescent girls should be careful regarding gas pressures, closeness of aorta to abdominal wall, and use smaller trocars. Uterine manipulation through vagina should be avoided if girl is not sexually active. Ovarian conservation should be aimed in young girls to preserve fertility. Figure3

Solid tumors or suspicion of malignancy should be addressed by a multidisciplinary team including an onco- surgeon. Malignant ovarian germ cell tumors (MOGCT) are highly chemo responsive, unilateral salpingo-oophorectomy (USO) and comprehensive surgical staging gives good prognosis. Sex cord stromal tumors (SCSTs), due to their good prognosis, the option of fertility preservation is supported and includes USO and complete surgical staging for FIGO Stage IA and IC disease. Epithelial ovarian cancers (EOC), fertility-sparing surgery is recommended for early-stage disease. Figure 4

A fertility expert should discuss the options of freezing egg or ovarian tissue conservation.

Counseling and consent: Counselling should be done in presence of parents or guardian making sure that the patient understands her condition and future course of action. A chaperone should be present during examination along with parents. Consent of parents or guardian should be taken along with the patient under 18 years of age for any procedure. Vaginal examination (VE), speculum and transvaginal ultrasound should never be used in girls who have never been sexually active.

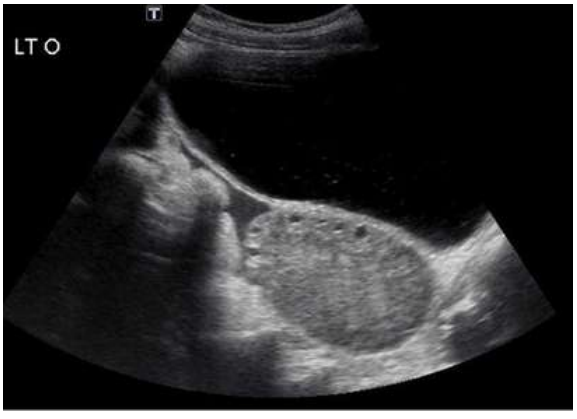

Figure 1

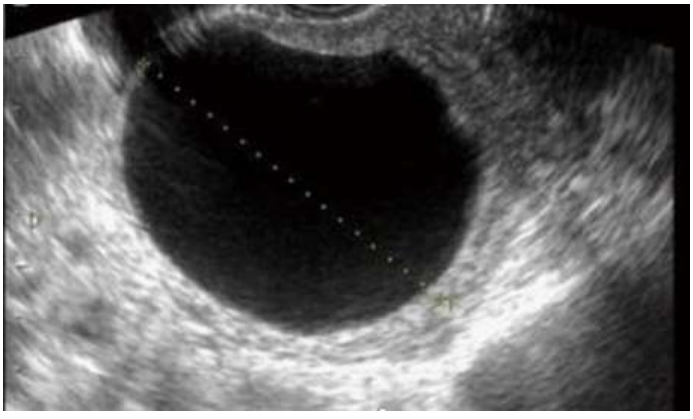

Figure 2

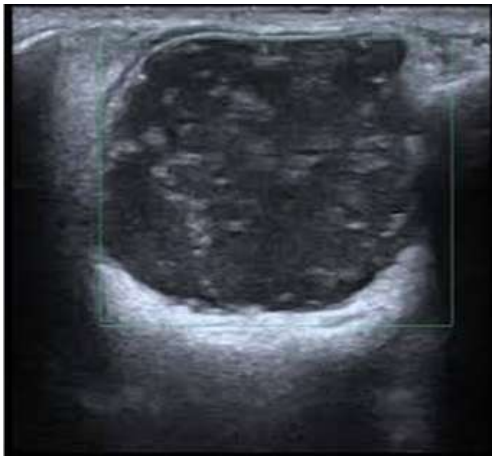

Figure 3

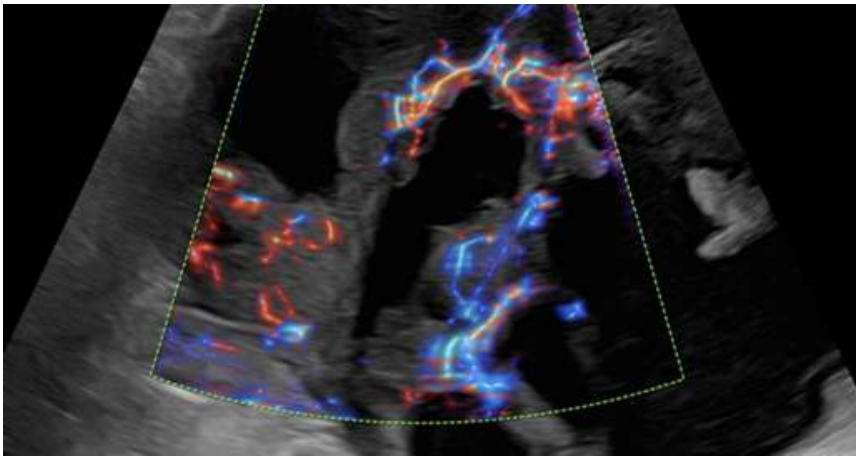

Figure 4

Conclusion :

Ovarian cysts in adolescents are most often functional cysts that do not require intervention. Of the ovarian tumours, benign mature teratomas are the most common, with low overall risk of malignancy. When required, surgery should be laparoscopic, with ovarian conservation whenever possible – even in cases of ovarian torsion. In complex ovarian tumours with suspicion of malignancy, involvement of gynaecology oncology, paediatric oncology surgeons and a multidisciplinary team is essential.

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Approach to the Adolescent with Chronic Arthritis: Clinical Evaluation, Psychosocial Challenges, and Transitional Care

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Introduction :

Chronic arthritis is one of the most common rheumatological disorders during adolescence, a critical developmental stage characterized by significant physical, emotional, and social changes. Chronic arthritis may impair growth and pubertal development, educational attainment, peer relationships, sports participation, and the development of independence. Therefore, management extends beyond disease control and requires attention to psychosocial wellbeing and successful transition to adult healthcare services.

Clinical Approach :

A detailed history and comprehensive physical examination form the cornerstone of evaluation. Assessment should include a structured psychosocial review by HEEADSS framework.

History Taking

Joint Symptoms :

- Age at onset
- Duration and progression of symptoms
- Pattern of joint involvement: Monoarthritis (single joint), Oligoarthritis (2–4 joints), Polyarthritis (≥5 joints)
- Pattern of spread: Migratory, additive, intermittent, Persistent
- Morning stiffness (inflammatory arthritis).
- Pain worsening with activity (mechanical Etiology)

Systemic Symptoms:

- Fever
- Fatigue
- Weight loss
- Skin rash
- Oral ulcers
- Photosensitivity
- Raynaud phenomenon
- Muscle weakness
- Gastrointestinal symptoms
- Recent infections
- Tuberculosis exposure

Other Relevant History :

- Family history of autoimmune diseases
- Psoriasis
- Ankylosing spondylitis
- Previous injuries
- Medication history
- Immunization status
- School attendance and academic performance
- Participation in sports and extracurricular activities

Physical Examination: The examination should be comprehensive and developmentally appropriate.

General Examination :

- Vital signs
- Fever
- Pallor
- Lymphadenopathy
- Growth parameters
- Nutritional status

Musculoskeletal Examination:

Table 1. Differentiation of arthritis from arthralgia

Feature	Arthritis	Arthralgia
Pain	Present	Present
Joint swelling	Present	Absent
Warmth	Often present	Absent
Restricted movement	Common	Usually, absent
Morning stiffness	Common	Minimal or absent
Objective synovitis	Present	Absent
Inflammatory markers	May be elevated	Usually, normal

Document: Joint involvement -Small/large, Symmetrical /asymmetrical, Axial/peripheral

Systemic Examination :

- Uveitis
- Malar rash
- Oral ulcers
- Hepatosplenomegaly
- Cardiovascular abnormalities
- Delayed puberty or growth failure

Table 2. Common Causes of Arthritis in Adolescence

Condition	Typical Features	Key Investigations
Juvenile Idiopathic Arthritis (JIA)	Chronic arthritis, morning stiffness, variable joint involvement	ESR, CRP, ANA, RF, imaging
Septic Arthritis	Acute painful swollen joint, fever, inability to bear weight	Joint aspiration, blood cultures
Acute Rheumatic Fever	Migratory polyarthritis, recent streptococcal infection	ASO titre, throat culture
Systemic Lupus Erythematosus (SLE)	Rash, oral ulcers, photosensitivity, arthritis	ANA, anti-dsDNA, complement levels
Reactive Arthritis	Arthritis following infection, enthesitis	Infection-specific testing
Juvenile Spondyloarthritis	Back pain, enthesitis, sacroiliitis	HLA-B27, MRI sacroiliac joints
Disseminated Gonococcal Infection	Migratory arthritis, tenosynovitis, rash	STI testing, cultures
Lyme Disease	Exposure history, migratory arthritis	Lyme serology

Imaging (radiograph, ultrasound, MRI) to identify: Early synovitis, Joint effusions, Erosions, Sacroiliitis, Structural damage

Psychosocial Challenges: Chronic arthritis can significantly affect psychological health and social functioning during adolescence.

Table 3. Psychosocial challenges in adolescents with chronic arthritis.

Challenge	Potential consequence	Intervention
Chronic pain	Anxiety, school absence	Pain management
Fatigue	Reduced participation	Activity pacing and sleep optimization
Depression	Poor adherence, social withdrawal	Psychological assessment and counseling
Social isolation	Reduced quality of life	Peer support programs
Body image concerns	Low self-esteem	Counseling and supportive therapy
Family dependence	Delayed autonomy	Gradual self-management training
School difficulties	Academic underachievement	Educational accommodations
Behavioural	Aggression, risk taking	Family centered care, counseling

Psychosocial Support Strategies :

- Routine psychosocial screening
- Counseling
- Cognitive behavioral therapy
- Peer support groups
- Family-centered care
- School-based support programs

Treatment :

- **Juvenile idiopathic arthritis:**

NSAIDs, corticosteroids, DMARDs, and biologic agents.

- **Septic arthritis:**

Urgent joint drainage and intravenous antibiotics.

- **Acute rheumatic fever:**

Penicillin, anti-inflammatory therapy, and secondary prophylaxis.

- **Systemic lupus erythematosus:**

Hydroxychloroquine, corticosteroids, and immunosuppressive agents.

Transitional Care :

Transition from pediatric to adult healthcare services is a critical period for adolescents with chronic arthritis. Poorly planned transitions are associated with loss to follow-up, medication nonadherence, increased disease activity, and reduced patient satisfaction. Transition should be viewed as a gradual process rather than a single transfer event. Preparation ideally begins in early adolescence. Successful transition depends on individualized planning, multidisciplinary collaboration, and active participation by the adolescent. Key components are as under:

Assessing transition readiness :

Address medical, psychological, educational, and vocational needs. Readiness may be influenced by disease severity, cognitive maturity, family support, and psychosocial circumstances.

Developing self-management competencies :

Adolescents should gradually assume responsibility for medication management, appointment scheduling, and communication with healthcare providers. Written transition plans and coordination between pediatric and adult rheumatology teams facilitate continuity of care.

Key points :

- A thorough history, including a HEEADDS assessment, is important.
- Decide investigations in the context of the history and examination findings.
- Management considerations include functional impact, medication compliance, body image and mental health, sexual health and transition to adult care.

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Emerging Therapies and Recent Advances in Adolescent Arthritis: From Biologics to Precision Medicine

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Adolescent arthritis, predominantly juvenile idiopathic arthritis (JIA), comprises a heterogeneous group of chronic immune-mediated disorders that can significantly impair physical function, growth, psychosocial development, and quality of life. Approximately 40–50% of patients continue to have active disease into adulthood, highlighting the need for early diagnosis and effective long-term treatment. Over the past two decades, advances in understanding disease pathogenesis and evolution of potent biological DMARDs have transformed management from non specific immunosuppression to targeted therapies. This marks in the onset of precision Medicine in the field of paediatric rheumatology.

Conventional treatment has traditionally relied on non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and conventional synthetic disease-modifying antirheumatic drugs (csDMARDs), particularly methotrexate. Methotrexate remains the cornerstone of therapy for many forms of polyarticular JIA because of its proven efficacy, safety, and cost-effectiveness. However, a substantial proportion of patients have persistent disease activity despite csDMARDs, necessitating the development of biologic agents targeting specific inflammatory pathways.

The introduction of biologic DMARDs has revolutionized the management of adolescent arthritis. Tumor necrosis factor (TNF) inhibitors, including etanercept, adalimumab, and infliximab were the first biologics to demonstrate remarkable improvements in disease control, physical function, and radiographic outcomes. They remain the preferred first-line biologic therapy for polyarticular JIA, enthesitis-related arthritis, juvenile psoriatic arthritis, and chronic anterior uveitis. Their success established the principle that selective cytokine inhibition could effectively suppress chronic synovial inflammation while reducing corticosteroid exposure and adverse effects from opportunistic confections.

Recognition of the central role of interleukin (IL)-1 and IL-6 in systemic JIA has led to another major therapeutic advance. IL-1 inhibitors such as anakinra and canakinumab produce rapid resolution of fever and systemic inflammation while markedly reducing the incidence of macrophage activation syndrome and long-term glucocorticoid dependence. Similarly, the IL-6 receptor antagonist tocilizumab has demonstrated excellent efficacy in both systemic and polyarticular JIA, particularly in patients with inadequate responses to TNF inhibitors.

Other biologic agents, including abatacept, which inhibits T-cell co-stimulation, and rituximab, which targets B cells in selected refractory cases, have further expanded treatment options for difficult-to-manage disease.

The latest evolution in therapy has been the introduction of targeted synthetic DMARDs, particularly Janus kinase (JAK) inhibitors. Unlike biologics, these oral agents inhibit intracellular signaling pathways shared by multiple cytokines. Tofacitinib has received regulatory approval for polyarticular-course JIA, while baricitinib and upadacitinib are emerging as promising options for selected patients. Oral administration, rapid onset of action, and efficacy in patients who fail biologic therapy make JAK inhibitors attractive alternatives. Nevertheless, careful monitoring for infections, herpes zoster, thromboembolic events, and laboratory abnormalities remains essential, especially during long-term treatment. Unlike popular belief, these drugs should be used only after ruling out latent TB especially in our country.

Equally important has been the adoption of the treat-to-target strategy, which emphasizes early diagnosis, regular assessment of disease activity measures, timely escalation of therapy, and achievement of clinical inactive disease or remission. International recommendations increasingly advocate individualized treatment adjustments every 3–6 months until predefined targets are reached. This approach has improved the quality of life of children with arthritis significantly, such that complete remissionis a possibility in these children.

The future of adolescent arthritis management lies in precision medicine. Despite the availability of multiple biologic and targeted therapies, approximately one-third of patients fail to respond adequately to their first biologic agent. Current treatment selection is largely empirical, resulting in delays before effective therapy is identified. Precision medicine aims to overcome this challenge by integrating clinical characteristics with whole exome sequencing.. This is especially true for younger children who do not respond well to conventional first line drugs or have a strong family history.

Several biomarkers show promise for individualized care. Serum S100 proteins (MRP8/14 and S100A12), IL-18, CXCL9, ferritin, and interferon gene signatures correlate with disease activity and may help identify patients at risk of flare or macrophage activation syndrome. Artificial intelligence and machine learning are increasingly being applied to integrate multidimensional datasets, enabling prediction of treatment response, disease progression, and relapse after medication withdrawal.

Future therapeutic strategies extend beyond cytokine blockade. IL-17 and IL-23 inhibitors are expanding treatment options for juvenile spondyloarthritis, while TYK2 inhibitors, Bruton tyrosine kinase inhibitors, regulatory T-cell therapies, mesenchymal stem cell therapy, microbiome modulation, and gene-editing technologies are under active investigation. Although many remain experimental, these approaches highlight the ongoing transition toward mechanism-based, individualized therapy.

In conclusion, remarkable advances in immunology have transformed adolescent arthritis from a disabling chronic disease into one in which sustained remission is increasingly achievable. Biologic and targeted synthetic DMARDs have dramatically improved outcomes, while treat-to-target strategies have optimized long-term disease control. The next decade is expected to witness the integration of molecular biomarkers, whole exome and genome sequencing and artificial intelligence into routine practice.

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Karnataka Policy on Responsible Digital Use Among Students and Children: A Public Health Framework for Promoting Digital Well-being

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Digital technology has transformed education, communication, and social interaction among children and adolescents. While digital platforms enhance learning opportunities and connectivity, excessive and inappropriate technology use has emerged as an important public health concern. Evidence suggests that problematic internet use is associated with anxiety, depression, sleep disorders, attention difficulties, poor academic performance, reduced physical activity, and impaired social functioning. Indian studies estimate that nearly one-quarter of adolescents exhibit signs of problematic internet use, underscoring the need for structured preventive interventions.

Recognizing these challenges, the Government of Karnataka has introduced a policy promoting responsible digital use among students and children. Developed through collaboration between the Department of Health and Family Welfare, the Department of School Education, and NIMHANS, the policy emphasizes healthy technology use while safeguarding children's mental, emotional, and social well-being. Karnataka is the first state in India to frame a digital use policy for students.

Policy Framework

The Karnataka policy adopts a three-dimensional approach encompassing prevention, promotion, and early response. Rather than discouraging technology use, the policy encourages balanced digital engagement that supports academic achievement while minimizing psychological and behavioural risks.

A major strength of the framework is the integration of digital wellness into existing educational curricula. Schools are encouraged to incorporate age-appropriate lessons on digital citizenship, online etiquette, cyber safety, privacy, social media literacy, and responsible online behaviour within life skills and Information and Communication Technology (ICT) education. These educational initiatives aim to build digital resilience while helping students understand the consequences of excessive screen exposure, including anxiety, stress, cyberbullying, irritability, and declining academic performance.

School-Based Digital Governance

The policy recommends that every school develop a comprehensive Digital Use Policy. Such institutional policies should define acceptable use of mobile phones and digital devices, establish guidelines for screen exposure during school activities, and specify procedures for addressing cyberbullying and digital misconduct.

Consistent with international recommendations, recreational screen time outside educational activities should remain below two hours daily for school-aged children and adolescents . Teachers are expected to guide students toward responsible digital practices while promoting healthy online–offline balance.

An important governance innovation is the establishment of Digital Safety and Wellness Committees comprising school administrators, teachers, counsellors or mental health professionals, and parent representatives. These committees oversee policy implementation, coordinate awareness campaigns, address cyber incidents, and monitor digital wellness initiatives within schools.

Early Identification and Capacity Building

Teachers occupy a pivotal position in recognizing early behavioural and emotional changes associated with excessive technology use. The Karnataka policy recommends systematic training to help educators identify warning signs such as declining concentration, behavioural disturbances, social withdrawal, loneliness, irritability, emotional dysregulation, and poor academic performance.

Schools should establish referral pathways linking students with counsellors and mental health professionals to ensure timely intervention. Early identification is particularly important because technology-related behavioural problems often coexist with anxiety, depression, attention-deficit disorders, and sleep disturbances.

To strengthen implementation, NIMHANS and its SHUT Clinic have developed a structured teacher training programme covering digital detox principles, technology addiction, the 5C framework (Craving, Control, Compulsion, Coping, and Consequences), classroom management strategies, cyber safety, online privacy, peer-led interventions, and sustainable school-based digital wellness programmes.

Cyberbullying and Student Protection

Cyberbullying has become one of the most serious consequences of increasing digital engagement among adolescents. Online harassment, threats, humiliation, exclusion, and dissemination of harmful content can significantly affect emotional well-being, resulting in depression, anxiety, poor academic outcomes, and suicidal behaviour.

The Karnataka policy mandates confidential reporting mechanisms, prompt institutional response, counselling support, and awareness regarding available mental health services including Tele-MANAS. Schools are encouraged to create psychologically safe environments where students feel comfortable reporting digital abuse without fear of punishment or stigma.

Role of Parents

Parental involvement remains fundamental to successful implementation of responsible digital use. The policy encourages schools to educate parents on establishing structured routines, implementing age-appropriate screen-time limits, supervising online activities, discussing privacy and online safety, and modelling responsible technology behaviour.

Families are encouraged to introduce device-free routines such as shared meals, storytelling, outdoor recreation, reading, board games, and family conversations. Research consistently demonstrates that parental modelling strongly influences children's digital behaviours and emotional regulation (AAP, 2024).

Public Health Significance

The Karnataka policy represents an important shift from isolated awareness campaigns toward a comprehensive public health approach to digital well-being. By integrating education, mental health promotion, parental engagement, school governance, and early intervention, the framework addresses multiple determinants of healthy technology use.

Importantly, the policy recognizes that digital well-being extends beyond reducing screen time. It encompasses digital literacy, emotional resilience, online safety, responsible citizenship, and balanced lifestyle practices. This multidimensional approach aligns closely with WHO recommendations promoting life-course mental health interventions through educational settings.

Conclusion

The Karnataka Policy on Responsible Digital Use Among Students and Children provides a comprehensive, evidence-informed framework addressing one of the most pressing child health challenges of the digital era. Through curriculum integration, institutional policies, teacher training, parental engagement, early identification of behavioural concerns, and promotion of healthy offline activities, the policy seeks to optimize the educational benefits of technology while minimizing associated harms.

Its collaborative, school-centred model offers a scalable framework that can inform similar initiatives across India and other low- and middle-income countries. Continued evaluation of implementation outcomes and long-term behavioural impact will be essential to strengthen evidence-based digital well-being policies that protect children's mental health while preparing them for responsible participation in an increasingly digital society.

Ask The Expert : Parents Questions

Question 1 : "My daughter joined her first year of college in the UK in September 2025. Recently, she feels low, worries whether she fits into her friend group, finds it difficult to develop close friendships, worries about her future, overthinks a lot, and lacks confidence, although I feel she is managing everything quite well."

Expert Answer: Thank you for sharing your concerns. What your daughter is experiencing is quite common among young adults who move away from home for higher education, especially to a different country. Adjusting to a new culture, academic environment, and social circle takes time. Feeling lonely, questioning whether one belongs, and worrying about the future are normal during this transition. Continue to reassure her that these feelings do not mean she is failing—they are part of adapting to a new environment. Encourage her to stay connected with family, maintain regular sleep, eat well, exercise, and participate in clubs or activities where she can gradually build meaningful friendships. Remind her that genuine friendships take time to develop. If her sadness, anxiety, sleep disturbances, or social withdrawal continue for more than a few weeks or begin affecting her studies or daily functioning, encourage her to seek support through the university counselling services or a healthcare professional. Seeking help early is a sign of strength. From what you have shared, it is encouraging that she continues to balance her responsibilities. Continue being the calm, reassuring presence she needs. Often, knowing that someone believes in them gives young people the confidence to keep moving forward.

Useful Links:
https://iapindia.org/pdf/guideline-Mental-Health-Issues-in-Adolescents.pdf

Question 2 : How should I interact with my teenage daughter? How can I encourage her to open up to others and build her confidence and resilience?

Expert Answer: The teenage years are a time of tremendous physical, emotional, and social change. More than advice, adolescents need parents who listen without judging. Spend at least 15–20 minutes every day talking with your daughter without discussing studies or correcting her.

Ask open-ended questions such as, "How was your day?" or "What made you smile today?". Help build her confidence by appreciating her efforts rather than only her achievements. Encourage her to participate in sports, hobbies, volunteering, or creative activities where she can experience success and learn from setbacks. Allow her to solve small problems independently while reassuring her that you are always available if she needs help. Remember, resilience develops not by protecting children from every difficulty but by helping them face challenges with support and confidence.

Useful Links:
https://iapindia.org/pdf/guideline-Mental-Health-Issues-in-Adolescents.pdf
https://nimhansbkt.demo-appiness.com/prodnimhans/documents/brochures/4fbcfe1a60714ebaa69ac3dae90f1e5f.pdf

Question 3 : "How to handle teens who feel peer pressure about not having a boyfriend or girlfriend? They rely on AI instead of textbooks, don't help at home but want to build a body at the gym, have unhealthy eating habits due to online food delivery and junk food, and spend excessive time on screens."

Expert Answer: You have beautifully summarized many of today's parenting challenges. Adolescents are growing up in a world shaped by social media, artificial intelligence, online food delivery, and constant peer influence. It is natural for parents to feel concerned. Peer pressure regarding relationships is common during adolescence. Reassure your teenager that having a boyfriend or girlfriend is not a measure of maturity or popularity. Healthy relationships develop naturally with emotional maturity and mutual respect. Artificial Intelligence can be a valuable learning tool when used responsibly, but it should complement learning—not replace textbooks, teachers, or critical thinking. Encourage your child to use AI to understand concepts, while continuing to read textbooks and reliable educational resources.

Household responsibilities help adolescents become independent and responsible adults. Involve them in age-appropriate family tasks and explain that physical strength is built not only in the gym but also through discipline and responsibility. Encourage home-cooked meals and discuss nutrition rather than criticizing food choices. Help your teenager make healthier decisions instead of imposing strict restrictions. Finally, create clear and consistent family rules for screen time. Balance technology with physical activity, hobbies, family conversations, and adequate sleep. "The goal is not to control adolescents, but to guide them towards responsible choices."

Useful Links:
https://iapindia.org/pdf/Guidelines-for-Normal-Sleep-and-Physical-Activity.pdf

Question 4 : "My child avoids physical activity, feels depressed and thinks we are not good parents."

Expert Answer: Thank you for sharing your concern so honestly. When a child loses interest in physical activity, feels persistently sad, and believes that parents do not understand them, it usually reflects emotional distress rather than laziness. Avoid arguing or forcing exercise. Instead, spend time listening without interrupting or correcting. Acknowledge your child's feelings and reassure them that your love is unconditional. Encourage simple family activities such as evening walks or games instead of insisting on formal exercise. If low mood, withdrawal, poor sleep, loss of interest, or hopelessness persist for more than two weeks, consult a pediatrician or mental health professional. Early support makes a significant difference.

Useful Links:
https://iapindia.org/pdf/guideline-Mental-Health-Issues-in-Adolescents.pdf
https://iapindia.org/pdf/Guidelines-for-Normal-Sleep-and-Physical-Activity.pdf

Question 5 : "How can I prepare my daughter for puberty? How can I keep her emotionally connected with parents?"

Expert Answer: Start talking to your daughter about puberty before the changes begin. Explain that menstruation, breast development, body hair, mood changes, and growth spurts are normal parts of growing up. Teach her about menstrual hygiene, body privacy, and personal safety, and encourage her to ask questions freely. To stay emotionally connected, make time to talk every day —even if only for a few minutes. Listen without interrupting or judging, respect her growing need for independence, and avoid criticizing or comparing her with others. Be someone she can trust with both her successes and her mistakes. A warm, supportive home where she feels heard and accepted is the strongest foundation for a lasting parent–child relationship.

Useful Links:
https://iapindia.org/pdf/Ch-026-Normal-Psychosocial-Development-in-Adolescents.pdf
https://iapindia.org/pdf/2808-Guideline-for-Attainment-of-Puberty.pdf

Question 6 : "How can I maintain a balanced diet?"

Expert Answer: A balanced diet is one that provides all the nutrients your body needs in the right proportions. Include a variety of whole grains, pulses, milk or dairy products, seasonal fruits, green leafy vegetables, nuts, and protein-rich foods such as eggs, fish, or legumes. Drink adequate water and try not to skip breakfast. Reduce the intake of sugary drinks, packaged snacks, fried foods, and highly processed foods. Healthy eating is not about strict dieting—it is about making nutritious food choices consistently. Remember, good nutrition improves immunity, energy levels, concentration, and long-term health. "Eat food that nourishes your body, not just satisfies your hunger."

Question 7 : "As a teacher, I use computers every day. Sometimes I feel stressed by technology. How can I manage it?"

Expert Answer : Technology is now an essential part of teaching, but excessive screen exposure can cause eye strain, fatigue, neck pain, and mental stress. Follow the 20-20-20 rule—every 20 minutes, look at an object 20 feet away for 20 seconds. Maintain good posture, take short breaks, and organize your work to avoid unnecessary digital overload. Also, create "technology-free" time after work by engaging in exercise, reading, hobbies, or spending time with family. Technology should simplify your work, not dominate your life. "Use technology wisely—don't let it use your time and peace of mind."

Question 8 : How can students improve their communication skill?

Expert Answer : Communication is an essential life skill that helps students express their thoughts clearly, build healthy relationships, and develop confidence. Like any other skill, it improves with regular practice. Teachers can encourage students to participate in class discussions, debates, storytelling, role plays, presentations, and group projects. Reading books, newspapers, and good-quality articles helps improve vocabulary, while writing journals, essays, and creative stories strengthens written communication. Teach students to be good listeners as well as good speakers. Encourage them to maintain eye contact, speak politely, respect different opinions, and express their ideas confidently without interrupting others. Creating a classroom where students feel safe to ask questions and make mistakes helps build confidence. Parents can also support communication skills by having regular family conversations, encouraging children to share their experiences, and limiting excessive screen time that replaces face-to-face interaction. Remember: Good communication is not about speaking the most—it is about listening carefully, expressing ideas clearly, and treating others with empathy and respect. These skills help students succeed not only in school but throughout life. "Life skills strengthen the mind, while supportive relationships strengthen the heart."

Useful Links:
https://iris.who.int/handle/10665/63552
https://www.unicef.org/education/life-skills

Question 9 : "What are some healthy habits for better mental and physical health?"

Expert Answer: Healthy living is built on simple daily habits. Eat nutritious meals, stay physically active, sleep adequately, drink plenty of water, and maintain good personal hygiene. Limit recreational screen time, spend time with supportive family and friends, practice gratitude or mindfulness, and make time for hobbies that bring joy. Good health is not achieved through occasional efforts but through small, consistent habits practiced every day.

Question 10 : How to motivate a child for good habits in every field?

Expert Answer: Children develop good habits not through constant reminders but by observing and practicing them every day. The most powerful motivator is your own example. If children see parents eating healthy, being physically active, reading, managing emotions calmly, and treating others with respect, they are more likely to adopt these habits themselves. Start with one or two small, achievable habits rather than trying to change everything at once. Set a regular routine for meals, sleep, study, physical activity, and family time. Give your child age-appropriate responsibilities at home and appreciate their efforts rather than expecting perfection. Praise positive behaviour, honesty, kindness, perseverance, and responsibility instead of focusing only on results or marks. Allow children to make simple decisions and learn from their mistakes. Encourage participation in sports, hobbies, reading, school activities, and community service to build confidence, discipline, and life skills. Avoid frequent criticism, comparisons with others, or using rewards and punishments as the only motivators. Remember, habits are formed through consistency, encouragement, and patience. A loving, supportive environment helps children develop values and behaviours that last a lifetime.

Useful Links:
https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing
https://www.unicef.org/parenting

Question 11 : What are the common parenting challenges, and how can parents handle them?

Expert Answer: Parenting is rewarding, but it also comes with challenges at every stage of a child's growth. Common concerns include managing behaviour, setting limits, balancing screen time, encouraging healthy habits, handling academic pressure, improving communication, and supporting emotional well-being. The key to overcoming these challenges is to build a relationship based on love, trust, and respect. Spend quality time with your child every day, listen without interrupting, and encourage open conversations. Set clear and consistent rules, but explain the reasons behind them. Be firm about values while remaining flexible and understanding. Avoid comparing your child with others or expecting perfection. Every child has unique strengths, interests, and a different pace of development. Praise effort, honesty, kindness, and perseverance rather than only achievements. Give children age-appropriate responsibilities and opportunities to make decisions so they develop confidence and independence. Children learn more from what parents do than from what they say. Be a positive role model by practising healthy habits, managing stress calmly, showing respect, and solving problems constructively. Remember, there is no such thing as a perfect parent. What children need most is a parent who is present, patient, consistent, and willing to learn and grow with them.

Useful Links:
https://www.unicef.org/parenting
https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing

Ask The Expert : Teens Questions

Question 1 : "I enjoy badminton but feel conscious about my body image, especially my thighs. How can I build confidence?"

Expert Answer: First of all, thank you for writing so honestly. Many teenagers have similar thoughts, but very few express them with such courage. From what you've shared, I see a bright, thoughtful young person who enjoys badminton, cares about her studies, wants to become a leader, values friendships, and wants to improve herself. Those are wonderful strengths. About your body—please remember that your body is still growing. Strong thighs are often an advantage in sports like badminton because they provide power, speed, and balance. Try not to compare yourself with edited images on social media. Your health and abilities matter much more than looking like someone else. "Confidence grows when you value yourself for your strengths, not your appearance." You already have many strengths—your love for sports, your good academic performance, and your desire to improve yourself. Keep nurturing these qualities. Never let social media decide your self-worth. The world needs your kindness, courage, and character far more than a perfect appearance.

Question 2 : "Sometimes I speak rudely to my mother and later feel guilty. How can I improve our relationship?"

Expert Answer: The fact that you feel guilty shows that you love your mother and value your relationship. During adolescence, emotions can sometimes become intense. When you calm down, apologise sincerely and explain how you were feeling. Try to spend a little time with your mother every day, share your thoughts openly, and remember that she is also learning how to understand your changing needs. Honest conversations strengthen relationships. "A sincere apology can heal many misunderstandings."

Question 3 : "I liked a boy, but when he found out, he reacted negatively. How do I move on?"

Expert Answer : Feeling hurt after rejection is completely natural, but please remember that one person's response does not determine your value. Allow yourself time to heal, continue focusing on your studies, badminton, hobbies, and friendships, and avoid blaming yourself. Every experience teaches us something about ourselves and helps us grow emotionally. The right relationships are built on mutual respect, kindness, and understanding. "Rejection closes one door but often opens another filled with new opportunities."

Question 4 : "I have a mobile phone addiction and want to focus on studies, badminton, fitness, and personal growth. What should I do?"

Expert Answer: Congratulations on recognizing the problem—that is the first step toward change. Set realistic daily screen-time limits, keep your phone away during study hours, switch off unnecessary notifications, and avoid using it before bedtime. Replace scrolling with activities you genuinely enjoy, such as badminton, reading, music, exercise, or spending time with family and friends. Remember that every hour invested in your health and learning brings you closer to the person you want to become. "Control your phone before it begins to control your life."

Question 5 : Everyone says I need "life skills"... but what are they actually, and how do I learn them without feeling lost?

Expert Answer: Think of life skills as the “operating system” for real life. They are the abilities that help you handle everyday challenges, build healthy relationships, make good decisions, and take care of yourself—both online and offline. Life skills include understanding and managing your emotions, communicating clearly, solving problems, making responsible decisions, thinking critically instead of believing everything you see on social media, managing stress, working with others, handling disagreements respectfully, showing empathy, and adapting when things don’t go as planned. The best part is that life skills are practised, not memorised.

You don’t learn them from a single lecture or book—you develop them by living, reflecting, and trying again. Start small: Make age-appropriate decisions instead of depending on others for every choice. Take responsibility for simple tasks at home or school. Join sports, clubs, volunteering, or group activities where you learn teamwork and leadership. Learn to express your opinions respectfully, even when others disagree. When you make a mistake, ask yourself, “What can I learn from this?” instead of “Why did I fail?”. Spend time with people who inspire positive habits and values. Remember, every new experience—whether it goes well or not—is helping you build life skills. You don’t have to have life figured out today. You just need to keep learning, one experience at a time. Take one small step every day. Small improvements become big changes over time.

Useful Links:
https://aif.org/wp-content/uploads/2018/10/Lifeskills-2018a_MAST.pdf
https://iapindia.org/pdf/Guidelines-for-Normal-Sleep-and-Physical-Activity.pdf
https://iapindia.org/pdf/Screentime-Guidelines-for-Parents-Ch-005.pdf

Question 6 : "As a child who has been very emotional, with poor mental health, stress, loneliness, and lack of care, support and communication from parents... Nowadays there is poor communication between parents and children. Many children who lack love develop suicidal thoughts. How can we solve this and create awareness?"

Expert Answer: First of all, thank you for writing so honestly and courageously. Your question reflects the feelings of many adolescents who struggle silently but hesitate to express themselves. Every child deserves to feel loved, heard, and valued. When communication between parents and children breaks down, feelings of loneliness, helplessness, and low self-esteem can develop. The first step is to remember that you are important, and your life has immense value. If you ever feel overwhelmed, don't keep your feelings to yourself. Talk to a trusted adult—a parent, teacher, relative, school counsellor, or pediatrician. Asking for help is a sign of courage, not weakness. For parents, the message is equally important: children need emotional connection more than material gifts. Spending even 15–20 minutes each day listening without judgment can transform a child's confidence and emotional health. Together, as families, schools, and healthcare professionals, we must create an environment where every child feels accepted, supported, and safe. "Every child needs someone who says, 'I'm here for you, no matter what.'"

Useful Links:
https://aif.org/wp-content/uploads/2018/10/Lifeskills-2018a_MAST.pdf

Question 7 : How to reduce the screen time? and How to manage studies? and How to maintain the time?

Expert Answer: Good time management is about balancing your studies, health, and leisure. Start by making a simple daily timetable that includes study time, physical activity, meals, hobbies, relaxation, and 8–10 hours of sleep. Study in focused sessions of 30–45 minutes with short breaks, and complete your most important tasks first. To reduce screen time, keep your phone away while studying, turn off unnecessary notifications, and avoid checking social media repeatedly. Set fixed times each day for entertainment or gaming instead of using your phone throughout the day. Replace some screen time with sports, reading, music, creative hobbies, or spending time with family and friends. Follow the 5S Rule for Better Time Management : Schedule (Plan your day and make a realistic to-do list) , Study (Focus on one task at a time without multitasking) , Switch Off (Keep your phone away during study time and limit recreational screen use) , Stay Active (Be physically active for at least 60 minutes every day) , Sleep (Get 8–10 hours of sleep every night to improve concentration, memory, and mood). "Strong habits create a strong future."

Useful Links:
https://iapindia.org/pdf/Screentime-Guidelines-for-Parents-Ch-005.pdf

Question 8 : School and Exam Stress (Recommended) "I am a Class 7 student. Sometimes the pressure of exams, homework, and getting good grades feels very overwhelming and makes me feel anxious. What are some simple, practical ways I can manage my study time and handle academic stress without feeling burned out?"

Expert Answer: Feeling stressed before exams or when you have a lot of schoolwork is normal. A little stress can motivate you to study, but too much stress can affect your concentration, sleep, and confidence. The key is to study smart, not just study longer. Plan your day by making a realistic timetable. Break large tasks into smaller, manageable goals and study in focused sessions of 30–45 minutes, followed by a 5–10-minute break. Complete difficult subjects when you are most alert and avoid leaving revision until the last minute. Take care of your health by eating balanced meals, drinking enough water, being physically active for at least 60 minutes every day, and getting 8–10 hours of sleep every night. Good sleep improves memory and concentration. Avoid studying with your phone beside you. Turn off unnecessary notifications and keep recreational screen time separate from study time. Spend some time each day doing something you enjoy, such as sports, music, drawing, reading, or talking with family and friends. Most importantly, remember that your marks do not define your worth. Every student learns at a different pace. Focus on improving each day rather than comparing yourself with others. If you continue to feel overwhelmed, anxious, or unable to cope, speak to your parents, a teacher, or your school counsellor. Asking for help is a sign of maturity and strength.

Question 9 : "As I am growing up, I find that friendships and peer dynamics can sometimes be complicated and stressful to handle. How can I build healthy boundaries with friends, handle peer pressure, and communicate better with my parents when I feel overwhelmed?"

Expert Answer: Friendships are an important part of growing up, but they should make you feel respected, supported, and accepted—not pressured or uncomfortable. A good friend respects your opinions, values, and personal boundaries. It is okay to say "No" if someone encourages you to do something that feels wrong or unsafe. You do not have to change yourself or follow the crowd to fit in. Choose friends who encourage positive habits and make you feel good about yourself. If you are upset or stressed, talk to your parents or another trusted adult.

Choose a calm time to share your thoughts honestly and explain how you are feeling. Parents may not always have immediate solutions, but listening and understanding can make a big difference. Good communication grows when both children and parents listen to each other with patience and respect. Remember that disagreements and misunderstandings are a normal part of relationships.

Try to listen carefully, express your feelings respectfully, and be willing to understand another person's point of view. If a friendship repeatedly makes you feel anxious, bullied, or unhappy, it is okay to step back and seek support. Most importantly, be yourself. Real friends value you for who you are—not for your appearance, popularity, or possessions. Building healthy friendships takes time, honesty, kindness, and mutual respect.

Summary of published journal titled "What Protects At Risk Young People in India from Using and Abusing Substances? A Photo Led Study of Lived Experience original article published in Journal of Adolescent Research

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original article https://doi.org/10.1177/07435584241231376)

Introduction :

This article is the review of original qualitative research article "What Protects At-Risk Young People in India from Using and Abusing Substances? A Photo-Led Study of Lived Experience"
The review summarizes and critically appraises the study while preserving the original findings and participant quotations.

Authors of the original article : Siobhan Hugh-Jones, Raginie Duara, Rebecca Graber, Sangeeta Goswami, and Anna Madill

Publication journal: published in the Journal of Adolescent Research (2024).

The original article can be accessed at: https://doi.org/10.1177/07435584241231376

SYSTEMATIC REVIEW OF THE ARTICLE

Adolescent substance abuse has become a major global public health issue, with growing consequences for social development, mental and physical health, and academic success. Adolescents in India are often subjected to a variety of interpersonal and environmental risk factors, such as peer pressure, substance-dependent family members, socioeconomic hardship, and restricted access to mental health services. These vulnerabilities may make it more likely that adolescents may experiment with drugs or develop serious substance use. The bulk of the work currently in publication has focused on identifying risk variables related to the start and persistence of substance use. Adolescents who face similar challenges but successfully abstain from substance use have received very less attention, despite the fact that this research have significantly enhanced our understanding of teenage substance-related behaviours.

Exploring the factors that enable these young individuals to remain resilient offers valuable opportunities for developing strengths-based prevention strategies.

By focusing on resilience instead of vulnerability, the qualitative study examined in this paper fills this significant gap. The study examined the protective factors that helped participants avoid alcohol and drug use despite significant risk exposure. It was carried out among teenagers in Assam who had close family members or friends who suffered from substance abuse.

By employing a novel photo-led interviewing technique based on the Social Development Model and the Resilience Approach, the researchers were able to gather detailed accounts of the psychological, social, familial, and personal elements that influenced sound decision-making.

Rather than merely documenting protective factors, the study highlights how adolescents actively construct resilience through supportive relationships, personal values, adaptive coping strategies, and future aspirations. The findings provide meaningful insights for clinicians, educators, mental health professionals, policymakers, and families seeking to strengthen preventive interventions for substance use among vulnerable adolescents.

This review presents a structured overview of the study, summarizes its principal findings, critically evaluates its methodological strengths and limitations, and discusses its relevance for adolescent health practice and public health policy.

Study Overview

The study used a **qualitative, strengths-based approach** to explore the protective factors and resilience mechanisms that help high-risk adolescents abstain from substance use, rather than focusing on risk factors for initiation.

The study was conducted in Assam, India, and included **15 adolescents** (7 males and 8 females) aged **15–18 years.** All participants had high of risk social context for substance abuse in the form of at least one of their close family members (parents or siblings) or friends or peers, who were indulge in substance abuse. However, despite of their risk exposure, these participants did not indulge in problematic substance use themselves, making them an appropriate population for exploring protective influences.

The study was guided by the **Resilience Approach** and the **Social Development Model,** which provided a strong theoretical framework to explain how individual, family, and social factors interact to promote resilience and prevent substance use.

A distinctive feature of the study was the use of **photo-led interviews**, where participants captured photographs representing experiences, relationships, or objects influencing their decision to avoid substance use.

These images served as discussion prompts, enabling richer exploration of adolescents' emotions and lived experiences than conventional interviews.

Data collection was undertaken between **April 2019 and October 2020**. Interview transcripts were analysed using **Reflexive Thematic Analysis**, a systematic qualitative approach that facilitated the identification, interpretation, and refinement of recurring patterns across participants' narratives. Through this analytical process, the researchers identified seven interconnected themes that collectively explained the protective factors contributing to resilience against substance use.

By adopting a participant-centred methodology, the study generated rich qualitative insights into how adolescents actively negotiate risk and develop protective strategies within challenging social and family environments.

Theme 1: Family Protects and Must Be Protected

Family emerged as the strongest and most consistent protective factor against substance use among adolescents. Participants described their families as a primary source of emotional support, moral guidance, and motivation to avoid alcohol and drugs. Positive relationships characterized by trust, encouragement, and open communication helped adolescents resist peer pressure, make healthier decisions, and develop a strong sense of responsibility, even in families where substance use was present. Rather than relying on fear or punishment, supportive family environments strengthened self-confidence, reinforced prosocial values, and enhanced adolescents' commitment to abstaining from behaviours that could harm themselves or their loved ones.

Participant A, whose brother was affected by substance dependence, acknowledged the central role of his parents in shaping his decisions, stating: "My parents are my pillars."

Similarly, **Participant B** used a photograph of his family to illustrate the deep emotional bond he shared with them and his commitment not to betray their trust. His narrative reflected a strong desire to protect his family's hopes and expectations by remaining free from substance use.
Link to the photo: https://journals.sagepub.com/cms/10.1177/07435584241231376/asset/45adfabf-80c5-4bae-97d5-e9a15bace37f/assets/images/large/10.1177_07435584241231376-fig2.jpg)

Participant C also described how witnessing the impact of addiction within her family increased her determination to avoid behaviours that could further burden her parents. Observing their emotional distress motivated her to make responsible decisions and contribute positively to the family's well-being.

Overall, families acted as a key protective factor by providing emotional support, trust, open communication, and supervision. These positive relationships strengthened resilience, helped adolescents resist substance use despite risks, and appeared more effective than punitive or fear-based prevention approaches.

Theme 2: Up-Close and Personal Experiences

Direct exposure to the harmful consequences of substance use was a significant protective factor. Participants described witnessing the physical, emotional, psychological, and social decline of family members and friends struggling with addiction. Rather than increasing curiosity, these experiences heightened awareness of the long-term consequences of substance use, fostered empathy, and reinforced their determination to make healthier choices and abstain from alcohol and drugs.

Participant D described her brother's transformation due to addiction, stating, **"I saw right in front of my eyes how he became crazy."** Similarly, **Participant E** used photographs of a **"hollow pipe"** and **"broken floor tiles"** to symbolize her brother's addiction, emotional emptiness, and fractured family relationships. These experiences reinforced their resilience and commitment to abstain from substance use.

Link to photo of hollow pipe:
https://journals.sagepub.com/cms/10.1177/07435584241231376/asset/1801468b-9d2c-4e1f-a624-8e743f9e1048/assets/images/large/10.1177_07435584241231376-fig5.jpg..

Link to photo of broken tiles:
https://journals.sagepub.com/cms/10.1177/07435584241231376/asset/b0eccae5-1b92-45bc-8780-90245cc0a6cf/assets/images/large/10.1177_07435584241231376-fig6.jpg

Participants reported that memories of witnessing addiction often resurfaced when they faced peer pressure or opportunities to use substances. Recalling the emotional distress, family disruption, and personal losses associated with addiction helped them resist temptation and strengthened their commitment to abstinence. These lived experiences enhanced risk perception, encouraged self-reflection, and served as a lasting protective factor influencing healthier decision-making.

Theme 3: Mind-Sets and Resolutions

Individual resolve and personal convictions emerged as important protective factors against substance use. Participants believed that abstaining from drugs and alcohol depended primarily on personal choice, self-discipline, and strong values rather than external circumstances. Despite growing up in environments where substance use was common, they relied on self-control, a **distinctive sense of purpose,** and commitment to their long-term goals to resist social pressures and make healthier decisions.

Participant B clearly articulated this perspective, stating: **"It's our own mindset whether we take substances or not. We are the only people who can control ourselves."**

Theme 4: Finding and Keeping Good Company

Supportive peer relationships emerged as an important protective factor against substance use. Participants reported that intentionally choosing friends who shared their values and avoided alcohol and drugs helped them resist peer pressure. By distancing themselves from substance-using peer groups and building friendships that encouraged healthy behaviours, they received emotional support, reinforced positive decision-making, and reduced their risk of engaging in substance use.

Participant F resisted alcohol offers by recalling his father's advice about **choosing good company,** showing how internalized parental guidance helped him make independent decisions despite peer pressure.

Participant G confidently refused alcohol by saying, "No, I'm happy. I don't want to do it," demonstrating self-confidence, assertiveness, clear personal boundaries, and strong self-efficacy in resisting peer pressure.

Participant E described being labelled as "boring" for refusing substances but remained confident in her decision, showing resilience against peer pressure. She used a photograph of a clock to symbolize the importance of everyday choices, emphasizing that avoiding substance use and making disciplined decisions were essential for achieving her long-term goals and building a meaningful future.

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Overall, positive peer relationships, confidence in personal values, and independent decision-making strengthened adolescents' resilience against substance use. Participants rejected social norms linking substance use with popularity or maturity and relied on self-control and future-oriented thinking to resist peer pressure. These findings suggest that promoting supportive peer networks, self-efficacy, critical thinking, and assertiveness may enhance substance use prevention.

Theme 5: Repulsed by Substances

Negative sensory and physical experiences with alcohol or drugs, including unpleasant effects and smell, emerged as protective factors that reinforced adolescents' belief that substance use is harmful. Combined with supportive family environments, positive values, and awareness of addiction, these experiences strengthened their commitment to remain substance-free.

Participant E described the smell of cannabis as **"suffocating,"** whereas **Participant G** reported **immediate vomiting** after his first alcohol consumption. These adverse sensory and physical experiences reinforced negative perceptions of substance use and strengthened their commitment to abstinence.

Negative first-hand sensory experiences with alcohol or drugs may act as natural deterrents by increasing adolescents' perception of risk. When reinforced by supportive family relationships, positive personal values, and adaptive coping strategies, these experiences strengthen resilience against substance use. The findings suggest that both physiological responses and psychosocial factors contribute to adolescents' decisions to remain substance-free.

Theme 6: Seeing Alternative Ways to Cope

According to the study, adolescents were able to manage stress without using drugs by strengthening their resilience through the use of healthy coping mechanisms like playing sports, spending time in nature, listening to music, reflecting on themselves, and asking for help from reliable people.

Participant D brought a photograph and described finding comfort by spending time beside a river, where the peaceful surroundings allowed her to calm her thoughts and regain emotional stability during periods of distress

(link to the photo *https://journals.sagepub.com/cms/10.1177/07435584241231376/asset/1046b67d-d84e-4b7e-a528-afd35b9ea901/assets/images/large/10.1177_07435584241231376-fig12.jpg).*

Similarly, Participant B reported that listening to music and playing games were effective ways of relieving stress and improving his mood. These activities provided a positive distraction from daily pressures and contributed to his emotional resilience.

Adolescents relied on trusted relationships, sports, and recreational activities as healthy coping strategies to manage emotional challenges without resorting to substance use. These findings highlight the importance of promoting emotional regulation, problem-solving skills, and supportive social environments in substance use prevention.

Theme 7: Having Something That Mattered More

Meaningful life goals and future aspirations acted as strong protective factors, with adolescents viewing substance use as a barrier to achieving their academic, career, and personal ambitions, thereby reinforcing their commitment to remain substance-free.

Participant B, who aspired to become an astrophysicist brought a photograph which clearly expressed the relationship between his aspirations and his decision to abstain from substance use: "If we take that stuff, alcohol, drugs, we will never succeed in what we want to become." (Link to photo *https://journals.sagepub.com/cms/10.1177/07435584241231376/asset/65b6e1b1-3ecf-448a-a42b-517d8b4bfb4e/assets/images/large/10.1177_07435584241231376-fig13.jpg)*

Participants emphasized that education, career success, financial independence, and personal growth were important future goals requiring self-discipline and good health. They viewed substance use as incompatible with these aspirations, reinforcing their commitment to abstinence.

Strengths of the Study

The study's major strengths include its strengths-based, preventive approach, focusing on why adolescents resist substance use rather than only on risk factors, thereby addressing an important gap in the literature. The use of photo-led interviews generated rich, authentic insights into participants lived experiences. It was supported by the Resilience Approach and Social Development Model, providing a strong theoretical foundation, and employed Reflexive Thematic Analysis to ensure systematic and credible theme development while preserving contextual depth. Additionally, the study identified modifiable protective factors—including supportive families, positive peer relationships, healthy coping, personal agency, and future aspirations—offering valuable guidance for resilience-based adolescent substance use prevention programmes.

Limitations of the Study

The study has several limitations. Its small sample size of only 15 adolescents from a single state in northeastern India limits the transferability of the findings to other settings. Selection bias may have occurred because all participants were recruited through rehabilitation-related organizations and had close family members or friends with substance use problems, reducing representativeness. Additionally, as a qualitative study, the findings relied on self-reported experiences and were therefore susceptible to recall bias, social desirability bias, and subjective interpretation.

Implications for Clinical Practice and Public Health

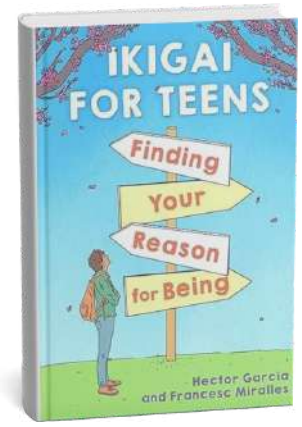
To prevent substance abuse in the adolescent the finding of this study can be used to make strategies for implementation of family-centred interventions, school- and community-based programmes (that promote life skills, mental health, and positive social engagement), as well as mentorship and career guidance initiatives that strengthen future orientation.

At the public health level, comprehensive multisectoral collaboration among families, schools, healthcare providers, communities, and policymakers is essential for creating supportive environments that foster resilience against substance use.

Book Review: Ikigai for Teens
Finding Your Reason for Being by Dr. Mamta Waikar

Dr. Mamta Waikar

MBBS, MD (Paediatrics), PGDAP, is a Senior Consultant Paediatrician and Director of Waikar Children's Clinic and Teens Guidance Clinic, Faridabad. Her areas of expertise include adolescent health, growth and mental health assessment, obesity, eating disorders, and child protection. She is passionate about promoting adolescent well-being and safe digital environments.



Introduction :

The Book- Ikigai for teens. Finding your reason for being…

This book is written by authors Hector Garcia and Frances Miralles, widely popular around the world for co-writing the bestselling extensively influential Ikigai books. They created this version for young readers from their international bestseller, Ikigai: The Japanese Secret to a Long and Happy Life, to help adolescents find their life purpose while navigating this turbulent phase of life.

As a doctor working closely with teenagers, I often meet young individuals who are not just dealing with physical concerns of puberty, but also carrying a quiet burden of confusion, self-doubt, and emotional overwhelm due to the end number of paths staring at them at this intersection of life journey. Questions about identity, purpose, and self-worth frequently surface—sometimes subtly, sometimes through behaviours like withdrawal, anxiety, or even unhealthy coping patterns.

Reading _Finding Your Reason for Being_ feels deeply relevant to what I witness in my clinical practice. The book echoes many of the conversations I often have with my patients. The uncertainty and confusion of what they want to do in life plagues a large percentage of our teens and young adults. In this extremely complex phase of life, this book can ease out the anguish in their inner world. Most will find the instance of being not sure of what to do in life highly relatable[1] . Parental, social or peer pressure to choose a certain career, a certain sport, certain outfits or even certain video games become sources of inner conflict so much so that they sometimes resign and tend to stay stuck. The book delivers the message in totality _ that it's okay to fail. Trying many paths, failing a number of times is taking them closer to their life purpose, their "IKIGAI".

What stands out is its compassionate approach to the idea of purpose. Teenagers today are under immense pressure to define their future early. They often equate their worth with achievements. This book softly challenges that narrative. It reassures them that purpose is not a fixed destination but an evolving process.From a clinical perspective, this shift alone can reduce a significant amount of anxiety I see in adolescents.

The concept of Ikigai-finding means that what one enjoys, values, and contributes should align closely with what we aim for in life. It encourages self-awareness and removes comparison which is particularly important in today's era dominated by social media. Many of my patients struggle with feeling "not enough," and this book can gently redirect them inward, ease out this feeling and help them recognize their own unique pace and path. The authors can connect with their target readers instantly. I have put the book in my office waiting area where teens can see it and can flip through it. Many have instantly taken a snapshot and have expressed the desire to read it.

I appreciate how the book promotes small reflective exercises. These can be powerful tools especially for teenagers who find it difficult to articulate their emotions. I particularly liked the method of finding out what you want to do in life by making a list of what you don't want to do. Teens are going to love it. It opens a door to the reader about how to find their identity and also motivates them, without making the read feel overwhelming.

That said, I do feel the book could have benefited from more real-life adolescent narratives, which might help teenagers feel more seen and understood. In practice, relatability often enhances engagement.

Overall, I see this book as more than just a self-help guide—it can serve as a supportive companion for teenagers navigating the most complex phase of life. For parents and healthcare professionals, it offers insight into how we might better guide young individuals: with patience, openness and less emphasis on immediate answers.

In my experience, when teenagers begin to feel that their life has meaning—even in small ways—their emotional and behavioural patterns often begin to shift positively. This book gently plants that seed.

Teens column

Ishagya Verma is a Grade 7 student at The Shishukunj International School, Jhalaria, Indore. An academically bright and creative young learner, she has a deep passion for painting, art, and story writing. Committed to environmental conservation, she actively leads an eco-awareness group in her township, inspiring her peers to adopt sustainable practices. Ishagya is the daughter of Dr. Chetna Verma, Pediatrician, and Dr. Arvind Verma Jangid, Orthopaedic Surgeon, both based in Indore.

Global warming by Ishagya Verma

I have always thought of the Earth as green and lush, with forests and plants. Younger me never had a thought about scorching summers during my birthday or freezing winters during New Years.

Growing up, I became aware about Global Warming.
I thought about it, and decided that I wanted to make a change in this world. So, I researched it and found out that about 15 billion trees are being cut annually and nothing is being done about it. Sure, some people are trying, but the majority of the population is not thinking about, only wanting luxury and facilities. Do we really need so many industries and buildings?

If we hadn't cut so many trees in the first place, we wouldn't want these things and objects. Nowadays, the "Want" is slowly turning into a "Need". We "need" an AC, we "need" coolers. No one actually thinks that if you plant a few trees, maybe your need will slowly vanish? Maybe your expenses will be fewer than usual?

Moving on from that, what about our future generations? I can hear trees say "Don't, cut me!". Would you like it if someone didn't hear you calling out?

This thought inspired me to talk about it in my society and put up awareness posters.
40-43 degrees temperature normally is not good news. What will happen in the future? We need to stop this!

Small steps always matter. Plant a few trees in your house. Save some water, including in water bottles. Save gas in vehicles.

WE NEED A CHANGE.

Teens column

Anushka Vighe, daughter of Sheetal and Dinesh Vighe, is a 16-year-old student of Birla Open Minds International School, Indore, currently studying in Grade 12. She is a nature enthusiast with a deep interest in reading and writing. Writing serves as a means for her to express her thoughts and find mental ease. In addition to writing, she enjoys listening to music, which is one of her favourite pastimes.

Recently, one of her poems, My Tenderhearted Father, was selected for inclusion in an anthology registered by the Government of India and is currently being published.

Poem by Anushka Vighe

In nature's grip, we thrive~

Beneath the skies of infinite blue,
where the clouds drift slow,
with a certain pride the behold,
where the tranquil mist,
gently veils the soaring mounts,
where the fountains tall,
they gracefully fall.

The low whispers of the leaves,
sound of birds among the trees,
the timeless song of the raging streams,
tells a harmonious melody,
the nature sings.

Among the trees tall,
light enters the rustling leaves,
forming patterns—
fascinating and vivid,
a quiet peace lingers,
stills for a moment,
For it beholds the privilege,
perceiving the creation of its own,
as in the nature's grip,
they thrive anew.

But,
the blinding greed of men so disastrous,
look around,
at the forests destroyed,
the planet marauded,
and the rivers poisoned.

For once, look,
at the plain slabs of concrete around,
standing where the lush greens, once stood,
where life danced it's way from,
now stands all empty and through.

Still,
try fanthom the proportions of your greed,
for there is only one planet Earth,
where we all must live.

Teens column

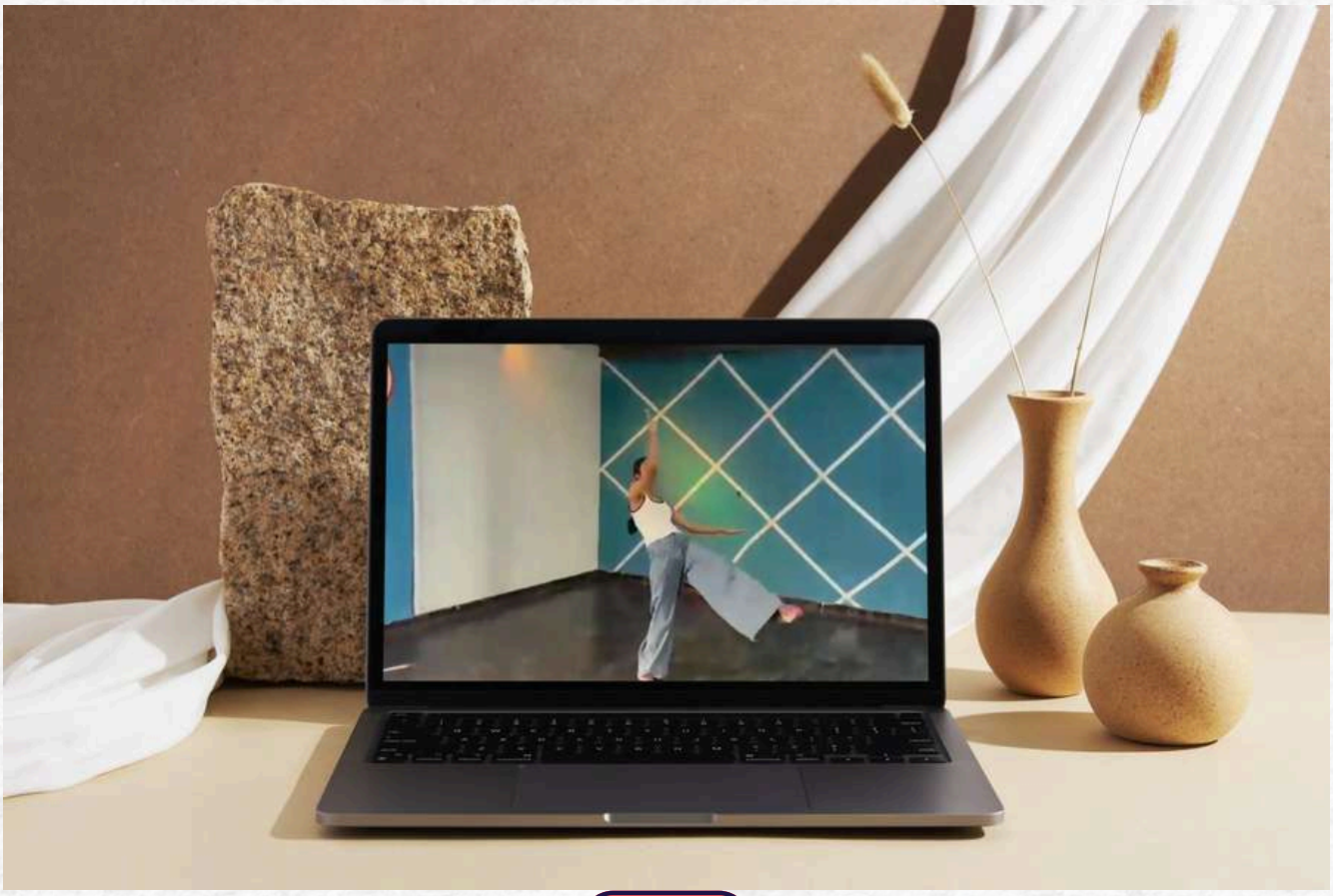
Monal Bhatia, 17 years old, is a student of St. Anthony's Senior Secondary School, Udaipur, Rajasthan. Passionate about quizzing, she has actively participated in numerous school and interschool quiz competitions, consistently nurturing her love for learning and knowledge. Her interest in quizzing has been inspired and encouraged by her father, Dr. Ravi Bhatia, a pediatrician from Udaipur, who is a national-level quiz champion and the author of several quiz books for children..

Achievements

- National Semifinalist – CBSE Heritage Quiz (2024 & 2025), one of the largest inter-school quiz competitions in India, telecast on History18.
- Runner-up – Battle of Minds (Army Quiz) 2024, a national competition with over 32,000 participating teams.
- National Semifinalist – Inquisitive – Indian Navy Quiz (2024 & 2025).
- Winner – INTACH Heritage Quiz

Teens column

Mishka Sultania has been performing on stage since the age of eight, with freestyle and contemporary being her favourite dance forms. Trained by Mr. Rishi Kushwaha, she is the daughter of Dr. Saurabh Sultania, Neurologist, and Dr. Meghana Sultania, Paediatrician and Adolescent Health Expert. Her family believes that dance is a powerful medium of self-expression and a healthy way to channel energy while building emotional resilience.



Upcoming Events

Here are some great events happening this Year that you might be interested in:

8th July 2026

Interchapter Webinar with CMIC

Every (3rd Thur) monthly | 3 – 4:30 PM (Online)

PG PEARLS Education Module- 2nd Edition

20th, 21st, 22nd, 28th & 29th July 2026

Life Skills Online Training (in collaboration with AACCI)

19th July 2026

Preteens Module for Doctors (Surat)

Adolescent Health Academy Association of Amritsar – 1st Annual Conference (UDAAN 2026)

22nd August 2026 (Saturday)

Pre-Conference Workshop – UTSAH (Project Preteens)

23rd August 2026 (Sunday)

Annual Conference – UDAAN 2026

IAP Karnataka & Karnataka Adolescent Health Academy

In association with Rajarajeswari Medical College & Hospital, Bengaluru

DAKSHIN AHACON 2026 – 29th & 30th August 2026

Date to be announced

Online Adolescent Endocrinology Module

Conducted every month

Interchapter Webinar & PG Pearls

AHA 2026

Communication links

Dear AHA 2026 Teammates, for smooth coordination and efficient functioning, kindly note and keep handy the following official AHA contacts, links & forms

01 **Official Central AHA Email**
iapahaindia@gmail.com

02 **AHA New Membership Application Form**
https://forms.gle/HKZp63AYcja4wfF96

03 **Official AHA Website**
https://aha.iapindia.org

04 **Instagram**
www.instagram.com/central.aha

05 **Instagram**
www.facebook.com/aha.central.2025

We kindly urge all members to save these important links and use them consistently for all official communications.

Together, let's make AHA 2026 more connected, visible & impactful.
Thank you for your cooperation!

Dr. Sushma Desai — **Chairperson IAP AHA 2026**
Dr. Shamik Ghosh — **Secretary IAP AHA 2026**
Dr. Prashant Kariya — **Joint Secretary IAP AHA 2026**
Dr. Samir Shah — **Digital Media Committee Incharge**

Join Us at Jaipur – Where Learning Inspires Change

The upcoming National Conference in Jaipur promises to be a vibrant platform for everyone committed to adolescent health. Designed to nurture knowledge, strengthen skills, and inspire action, the conference embraces a holistic approach to adolescent care while fostering excellence in clinical practice, academics, and advocacy.

Whether you are a postgraduate student taking your first steps, a young pediatrician exploring Adolescent Medicine, or an experienced specialist seeking to enhance your expertise, the conference offers something for everyone.

Highlights include:

* Holistic and contemporary perspectives on adolescent healthcare
* A guiding platform for postgraduate students and new entrants to the field
* Capacity-building sessions for Adolescent Health specialists
* Practice-oriented academic deliberations
* Hands-on skill-building workshops
* Community outreach initiatives promoting adolescent well-being
* Distribution of resources supporting Adolescent-Friendly Health Services
* Scientific paper and poster presentations showcasing innovative work

Join us in Jaipur to learn, collaborate, innovate, and together shape a healthier future for every adolescent.

ADOLESCON 2026

26th National Conference of Adolescent Health Academy

CAHA – Jaipur AHA (In Association with IAP Rajasthan & Jaipur)

DATE : 27TH – 29TH NOV. 2026

VENUE : RAJASTHAN INTERNATIONAL CENTER (RIC) JAIPUR

LAST DATE 15TH SEPTEMBER 2026

CALL FOR ABSTRACT

ABSTRACT SUBMISSION

LAST DATE FOR ABSTRACT SUBMISSION : 15TH SEPTEMBER 2026

REGISTER TODAY & SUBMIT YOUR ABSTRACT NOW

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To Register

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Warm Regards :

Organising Committee, ADOLESCON 2026

(In Association with AHA & IAP Jaipur & Rajasthan)

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adolescon2026@globalics.in

LAST DATE FOR ABSTRACT SUBMISSION (PAPER & POSTER) : 15TH SEPTEMBER 2026