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"If there are challenges thrown across, then some interesting, innovative solutions are found. Without challenges, the tendency is to go on the same way.
-Ratan Tata"

EDITORIAL

A VITAL NEED

Wildlife conservation is an urgent and essential effort to protect and preserve the diverse species of animals, plants, and their natural habitats. With increasing threats such as deforestation, climate change, poaching, and habitat destruction, many species are on the brink of extinction. Conservation efforts aim to maintain biodiversity, ensure ecological balance, and secure a sustainable future for all living beings.

Wildlife plays a crucial role in maintaining the delicate balance of ecosystems. Each species, whether predator or prey, contributes to the natural food chain. For example, predators like tigers and lions control herbivore populations, preventing overgrazing and maintaining forest health. Likewise, pollinators such as bees and butterflies help in plant reproduction, ensuring the survival of numerous plant species.

Biodiversity also provides essential resources for humans, including food, medicine, and raw materials. Many medicinal compounds are derived from plants and animals, highlighting the importance of preserving diverse species. Additionally, healthy ecosystems regulate climate, air, and water quality, offering benefits that sustain human life.

Rapid urbanization, agriculture, and industrial expansion are leading to massive habitat loss. Forests, wetlands, and grasslands are being cleared, leaving animals without homes and food sources.

The hunting of animals for their skin, bones, and other body parts has endangered species like rhinos, elephants, and tigers. Illegal wildlife trade fuels biodiversity loss and disrupts natural ecosystems.

Rising temperatures, melting glaciers, and changing rainfall patterns affect wildlife habitats. Many species struggle to adapt, leading to population declines. Polar bears, for example, are losing their ice habitats due to global warming.

Plastic waste, chemicals, and oil spills harm marine and terrestrial life. Sea turtles, for instance, often mistake plastic for food, leading to fatal consequences.

As human populations expand, conflicts between humans and wild animals increase. Elephants raiding crops, leopards entering villages, and wolves attacking livestock often lead to retaliatory killings.

Governments and organizations worldwide are creating national parks, wildlife sanctuaries, and biosphere reserves to protect endangered species.

Anterior Knee Pain: Causes, Precautions and Treatment

■ DR. RAJKUMAR SINGH

Anterior knee pain is the pain located at the front of the knee, typically around or behind the patella (kneecap). It is a common complaint in athletes, active individuals, and those with specific anatomical or biomechanical issues. It originates from structures in and around the patellofemoral joint, including the patellar tendon, cartilage, ligaments, or surrounding soft tissues. It can also be due to mechanical stress, inflammation, or degenerative changes. a. Causes: Anterior knee pain can result from various conditions, including: Patellofemoral Pain Syndrome (PFPS) - Overuse or misalignment of the kneecap. Chondromalacia Patella - Softening and degeneration of cartilage under the patella. Patellar Tendinitis (Jumper's Knee) - Inflammation of the patellar tendon due to repetitive stress. Osgood-Schlatter Disease - Common in adolescents, caused by excessive stress on the tibial tuberosity. Quadriceps or Hamstring Imbalance - Muscle weakness or tightness affecting knee stability. Trauma or Injury - Direct impact, fractures, or ligament injuries. Arthritis - Osteoarthritis or rheumatoid arthritis affecting the knee joint. Overuse or Poor Biomechanics - Excessive running, jumping, or improper movement patterns. b. Symptoms: Dull, aching pain in the front of the knee. Pain worsens with activities such as running, jumping, squatting, or climbing stairs. Stiffness after prolonged sitting (Theater Sign). Swelling or tenderness around the kneecap. Popping or grinding sensation (Crepitus) with knee movement.

Diet and precautions for Anterior Knee Pain

A well-balanced diet can help reduce inflammation, support joint health, and promote healing. Anti-Inflammatory Foods: a. Foods to Take: Omega-3 Fatty Acids: Found in salmon, flaxseeds, and walnuts; help reduce joint inflammation. Turmeric & Ginger: Natural anti-inflammatory spices that may relieve pain. Fruits & Vegetables: Rich in antioxidants and vitamins; especially berries, spinach, and broccoli. Nuts & Seeds: Almonds, walnuts, and chia seeds support joint lubrication. Whole Grains: Brown rice, quinoa, and oats help in maintaining energy levels. b. Bone & Cartilage Health: Calcium & Vitamin D: Found in dairy products, fortified cereals, and sunlight exposure. Collagen-Boosting Foods: Bone broth, citrus fruits (vitamin C helps collagen production). c. Foods to Avoid: Processed & Sugary Foods: Increase inflammation and may worsen symptoms. Excessive Salt: Leads to fluid retention and potential joint discomfort. Red Meat & Fried Foods: High in saturated fats, which can trigger inflammation. Precautions: a. Activity Modifications: Avoid High-Impact Activities: Running on hard surfaces, jumping, and deep squats can aggravate pain. Gradual Progression: Increase exercise intensity slowly to prevent overuse injuries. Low-Impact Exercises: Swimming, cycling, and walking are gentler on the knees. b. Proper Biomechanics Correct Posture & Alignment: Avoid excessive knee bending or poor sitting postures. Use Proper Footwear: Supportive shoes help reduce stress on the knees. Orthotics if Needed: Custom shoe inserts can correct foot alignment and reduce knee strain. c. Strength & Flexibility: Strengthen Quadriceps & Hamstrings: Helps stabilize the knee joint. Stretch Regularly: Focus on hamstrings, quadriceps, and calf muscles to prevent stiffness. d. Weight Management: Maintain a Healthy Weight: Excess weight puts additional stress on the knee joint. e. Pain Management: Apply Ice: Reduces swelling and pain (15-20 minutes every few hours). Use Knee Braces or Taping: Provides additional support during activities. Physiotherapy: Helps with guided exercises and pain relief techniques.

Advancements and future treatment

Recent advancements in treatment of anterior knee pain include: a. Regenerative Medicine: Platelet-Rich Plasma (PRP) Therapy: Uses the patient's own blood components to promote healing and reduce inflammation. Stem Cell Therapy: Stem cells derived from bone marrow or fat tissue are injected to regenerate damaged cartilage. b. Minimally Invasive Procedures: Arthroscopic Surgery: Small incisions allow precise repair of cartilage damage or realignment of the patella. Radiofrequency Ablation (RFA): Uses heat energy to block pain signals from nerves around the knee. c. Advanced Biomechanics & Wearable Tech: Smart Braces & Exoskeletons: Provide real-time feedback to correct movement patterns and reduce strain. Motion Tracking & AI-based Rehabilitation: AI-powered systems analyze movement and personalize treatment. d. 3D-Printed Implants & Bioengineering: Custom Knee Implants: Personalized 3D-printed joint implants improve fit and longevity. Cartilage Tissue Engineering: Lab-grown cartilage from stem cells could replace damaged tissue in the future. While the future directions in treatment include: a. Gene Therapy: Research is exploring genetic modification to prevent cartilage breakdown and promote regeneration. b. Nanotechnology: Nano-drugs that deliver anti-inflammatory agents directly to damaged knee tissues. Nano-implants to stimulate tissue repair at a cellular level. c. Personalized Medicine : AI-driven diagnostics will help customize treatments based on individual genetic and biomechanical profiles. d. Advanced Pain Management: Non-opioid pain relief innovations such as nerve stimulation and bioelectric therapy.

Status of anterior knee pain treatment

In India, the management of anterior knee pain encompasses a range of treatments, from conservative approaches to advanced medical interventions. a. Conservative Treatments: Rest and Ice: Temporarily avoiding activities that exacerbate knee pain, combined with applying ice packs, can help reduce inflammation and alleviate discomfort. Physical Therapy: Engaging in targeted exercises under the guidance of a physiotherapist can strengthen the muscles around the knee, improve flexibility, and enhance joint stability. Medications: Non-steroidal anti-inflammatory drugs (NSAIDs) may be prescribed to manage pain and reduce inflammation. b. Advanced Interventions: Injections: For persistent pain, options such as corticosteroid injections can provide temporary relief. Platelet-rich plasma (PRP) injections, which utilize components of the patient's own blood to promote healing, are also being explored in some Indian medical centers. c. Minimally Invasive Procedures: Techniques like cooled radiofrequency treatment aim to deactivate nerves responsible for transmitting pain signals, offering relief for chronic knee pain without the need for surgery. d. Surgical Options: Surgery is generally considered when conservative treatments fail to provide relief. Procedures such as arthroscopic surgery can address specific structural issues within the knee joint. e. Holistic and Multidisciplinary Approaches: Some clinics in India adopt a comprehensive approach to knee pain management, incorporating physical therapy, nutritional guidance, and psychological support to address the multifaceted nature of chronic pain. It's essential for individuals experiencing anterior knee pain to consult with healthcare professionals to determine the most appropriate treatment plan tailored to their specific condition.

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Ban on DeepSeek escalates digital diplomacy concerns

■ VINIT UTPAL

The DeepSeek, a Chinese AI has been banned by several countries such as the US, Australia, Italy, South Korea and Taiwan due to security concerns has sparked global discourse. The ban follows fears over data security with concerns that the Chinese government could access sensitive information stored in China. According to DeepSeek's Privacy Policy, "When you use our Services, we may collect your text or audio input, prompts, uploaded files, feedback, chat history or other content that you provide to our model and Services." DeepSeek also stated, "The personal information we collect from you may be stored on a server located outside the country where you live. We store the information we collect in secure servers located in the People's Republic of China."

In January, DeepSeek released the latest version of its program, DeepSeek R1. Within a month, New York State became the first US state to ban the app, citing national security risks. This ban triggered broader international scrutiny as other nations including Italy, Taiwan, Australia, South Korea and others followed suit. Some countries have restricted the use of this app in sensitive departments. In India, the Ministry of Finance banned DeepSeek for its employees joining several other government agencies worldwide. The Delhi High Court also observed that artificial intelligence (AI) is a "dangerous tool" in anyone's hands, whether Chinese or American. The court's observation came while hearing a petition seeking a directive to block access to DeepSeek, which provides its services free of charge in India.

Most countries blocking DeepSeek programs cite security risks posed by the Chinese application. They also express concerns about how user data will be stored or used. While major tech companies like Meta and Google also exploit user data to some extent, they typically use it for targeted advertising, algorithmic refinement and AI training. These companies have faced several legal cases regarding privacy breaches in different countries, but they regulate within each country's jurisdiction. In the case of DeepSeek, the app is viewed differently by the West, as it is seen as operating under Chinese government jurisdiction. There are global fears that the data collected by Chinese platforms could be used for espionage, influence operations or surveillance.

It is also said that the Western tech companies are often considered problematic yet fixable through regulation, Chinese companies are seen as direct security threats requiring outright bans.

One primary reason government agencies have prohibited DeepSeek is the potential for national security violations and unauthorized data collection. Security experts have also raised concerns that DeepSeek may have hidden mechanisms that enable it to collect and send sensitive user information to Chinese entities. The AI system is said to collect various types of data, including IP addresses, conversation records and metadata. While data gathering is common among AI chatbots, the concern with DeepSeek is where this information is stored and who may have access.

China's cyber security regulations mandate that businesses operating in the nation assist government agencies when requested. This means that if DeepSeek stores information on Chinese servers, it would be accessible to state agencies raising red flags for most governments, especially in democratic nations where user privacy is a top priority.

Many governments are reluctant to allow DeepSeek access to official devices, fearing that this could open sensitive information to foreign surveillance or cyber espionage.

Aside from data collection issues, there is also the risk of adversarial attacks. AI chatbots can be manipulated or hacked to present inaccurate information, potentially compromising government processes. Official functions that utilize AI-generated content could be vulnerable to external manipulation, further raising concerns about misinformation and security breaches.

Another significant issue surrounding DeepSeek is its content moderation practices. Several reports indicate that the AI chatbot either sidesteps or alters responses to politically sensitive questions. DeepSeek's actions have raised concerns about the use of AI to influence public opinion and control the flow of information.

For example, when asked about the country to which the state of Arunachal Pradesh belongs, DeepSeek declined to answer, stating, "That is beyond my current scope. Let's talk about something else."

Similarly, when questioned about the 1989 Tiananmen Square protests, DeepSeek either declined to answer or provided responses that aligned with the Chinese government's official narrative.

Issues related to Taiwan's political status, human rights violations against the Uyghur population or the Hong Kong pro-democracy movement are often censored or framed in support of the Communist Party of China (CCP) positions.

This level of content moderation has led critics to accuse DeepSeek of being a potential propaganda tool.

The capacity of AI to influence public opinion makes it especially dangerous when used in government contexts. If politicians or officials base decisions on biased or censored AI-generated content, it could lead to flawed decision-making.

Governments banning DeepSeek argue that AI software must be balanced and fact-based not designed to promote a particular political agenda. Using AI models in public institutions may lead to the inadvertent spread of misinformation, which could undermine democratic values like free speech and access to truthful information.

The widespread bans on DeepSeek by governments and sensitive departments highlight the need for global AI regulation. Such regulations directly impact data privacy and national security. While AI is incredibly useful for solving many societal challenges, it also has the potential to spread harmful content and this cannot be ignored.

In this context, there is a need for strict laws and regulations regarding foreign AI to ensure the security and integrity of India and the better future of society.

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Trump and Zelenskyy clash in heated White House showdown

■ MANMOHAN DHAR

A very High-Stakes Meeting between President Trump of the United States, Vice President JD Vance and President Volodymyr Zelenskyy of Ukraine, at the white house ended on a very unfriendly note when they met to have talks on Ukraine Russia war and other bilateral issues.

The highly anticipated meeting between the two Presidents erupted into a dramatic confrontation, ending with the Ukrainian delegation abruptly dismissed from the White House. What was initially planned as a diplomatic discussion on minerals and U.S. support for Ukraine's war effort quickly turned into a verbal showdown that left relations between the two nations in jeopardy.

The meeting began with discussions on a proposed minerals agreement, which Ukraine hoped would secure vital U.S. backing in its ongoing war against Russia. However, the conversation took a sharp turn when U.S. Vice President J.D. Vance emphasized the need for diplomatic negotiations to end the conflict. Zelenskyy, in turn, firmly rejected the notion that a ceasefire with Russia was a viable option, citing past broken agreements and continued Russian aggression.

President Zelensky in a way tried to push President Trump, in a very undiplomatic manner which was very uncalled for the white house guest. And, unsurprisingly President Trump got increasingly frustrated with Zelenskyy's resistance to peace talks.

The former Ukrainian comedian-turned-wartime leader stood his ground, reiterating that Ukraine needed military support, not negotiations with an untrustworthy Kremlin. At this point, Trump reportedly accused Zelenskyy of disrespecting his administration and "playing a dangerous game that could lead to World War III." In fact he accused him of gambling with world warIII.

The tension in the room escalated as Trump's tone became more confrontational. He criticized Zelenskyy's leadership, questioned the effectiveness of continued U.S. aid to Ukraine, and suggested that the war was becoming an unnecessary burden on American taxpayers.

The heated exchange reached its breaking point when Trump abruptly ended the meeting, ordering the Ukrainian delegation to leave the White House. The sudden dismissal sent shockwaves through diplomatic circles, with analysts calling it one of the most hostile encounters between U.S. and Ukrainian leaders in modern history.

Never before has there been such a heated exchange of words and confrontational stand off between the two countries at a meeting.

It was entirely unprecedented, unpredictable and absolutely undiplomatic for a leader who had met a world leader of Trump's stature to help him in bringing peace to his people.

It looked as if Zelenskyy was interested more in getting America to his side than trying bring peace to the people of war torn people of Ukraine.

Though Zelenskyy did not get the desired results, European allies were quick to respond, with many expressing their continued support for Ukraine while privately voicing concerns over the deteriorating U.S.-Ukraine relationship. Some viewed Trump's approach as reckless, while others saw it as a calculated move to reshape American foreign policy priorities.

Following the clash and with a belief that EU is still on his side, Zelenskyy issued a carefully worded statement emphasizing the importance of maintaining U.S. support for Ukraine. He stopped short of directly criticizing Trump but made it clear that Ukraine would not bow to pressure to negotiate under unfavorable terms. Meanwhile, Trump and his administration doubled down on their stance, with Vice President Vance stating that "America's role is to lead with strength, not to be dragged into endless wars."

As the dust settles, the fallout from this explosive meeting is likely to have lasting implications for U.S.-Ukraine relations, global diplomacy, and the ongoing war in Eastern Europe. With Zelenskyy now seeking stronger support from European allies, and Trump pushing for a shift in U.S. foreign policy, the world watches to see what comes next. Whatever the outcome, there is a very evident message that goes out loud and clear for the world, to understand with a conviction, that all is not well with the world peace.

Board Exam Anxiety: Experts Weigh In on Prevention Measures

■ VISHAL DOGRA

As students gear up for upcoming board exams, mental health professionals share tips on managing anxiety and stress........

As the board exam season approaches, students across the country are feeling the heat. The pressure to perform well can be overwhelming, leading to anxiety and stress. But experts say that with the right mindset and strategies, students can manage their anxiety and excel in their exams.

"Board exams can be a high-stakes situation, but it's essential to remember that it's not a defining moment in a student's life," says Dr. Smitha, a clinical psychologist. "Anxiety can be debilitating, but there are many ways to manage it." So, what can students do to prevent exam anxiety?

1st strategy: Preparation is a prominent key
One of the most effective ways to reduce anxiety is to be well-prepared. Students should make a study plan, break down their syllabus, and practice regularly. "When students feel prepared, they feel more confident, and anxiety reduces," says Dr. Smitha.

2nd strategy: Practising Relaxation techniques
Relaxation techniques such as deep breathing, progressive muscle relaxation, and visualization can help calm the nerves. Students can also try yoga, meditation, or mindfulness exercises to reduce stress.

3rd strategy: Get adequate sleep
Lack of sleep can exacerbate anxiety. Students should aim for 7-8 hours of sleep each night and establish a consistent sleep routine.

4th strategy: Stay Positive
A positive mindset can go a long way in reducing anxiety. Students should focus on their strengths, remind themselves of their preparation, and try to reframe negative thoughts.

5th strategy: Seek for a considerable support
Finally, students should not hesitate to seek support from family, friends, or mental health professionals. "Talking to someone about your anxiety can help you feel heard and understood," says Dr. Smitha.

As the exam season approaches, it's essential for students to remember that they are not alone. With the right mindset, strategies, and support, they can overcome anxiety and achieve their goals. And being a Mental Health Counsellor, I'm hereby to spread the message to all the students who are aspiring to Board exams is that, kindly maintain Self confidence and stay motivated to do your best and aspire towards your destined goals in your life.

(The writer is PhD Scholar (MRIU) & Mental Health Counsellor APS Rakhmuthi)