

## CYBER THREATS: KVK-Student Connect: Bridging the Disconnect

## A noble initiative of KVK-Ramban

As the world becomes increasingly interconnected, the complexity and frequency of cyber threats are escalating. From personal data breaches to large-scale cyberattacks targeting critical infrastructure, cybersecurity has never been more crucial. In 2024, cybercriminals continue to exploit vulnerabilities in both technology and human behavior. Here's a look at some of the latest and most concerning cyber threats.

Ransomware attacks have been around for years, but their sophistication and impact have grown significantly.

In 2024, ransomware attacks often involve a technique known as double extortion, where hackers not only encrypt the victim's files but also steal sensitive data. The criminals then threaten to release or sell this data unless the ransom is paid.

In 2024, the number of zero-day exploits being discovered and actively exploited has increased, and hackers are increasingly selling these exploits on the dark web. Threats like browser exploits, vulnerabilities in IoT devices, and cloud services are common targets. Once a zero-day exploit is discovered, it can be used in a wide range of attacks, from targeted espionage to ransomware campaigns.

As more devices become connected to the internet, the Internet of Things (IoT) is emerging as a growing vulnerability in the cybersecurity landscape. IoT devices, such as smart home products, medical devices, and industrial control systems, often have weak security controls and are poorly patched, making them prime targets for cybercriminals.

In 2024, botnets composed of IoT devices, such as Mirai, continue to be a significant threat. These botnets are used to launch large-scale DDoS attacks, disrupt critical infrastructure, or even gain unauthorized access to private networks.

In 2024, phishing attacks are often blended with social engineering tactics, where attackers manipulate the victim into taking action, such as downloading a malicious attachment or clicking on a link that installs malware. Many phishing campaigns are targeting specific sectors, such as finance, healthcare, and government, to steal financial data, intellectual property, or trade secrets.

Artificial Intelligence (AI) is not just being used for cybersecurity defense; cybercriminals are now leveraging AI to launch more sophisticated attacks. AI and machine learning (ML) algorithms can be used to automate tasks such as vulnerability scanning, data collection, and social engineering. Attackers can use AI to create deepfake videos or audio to impersonate executives or public figures, facilitating scams or unauthorized access to systems.

Cryptocurrency-related crimes are on the rise, with cybercriminals using digital currencies for money laundering, ransom payments, and illicit trading on the dark web. In 2024, attacks targeting cryptocurrency exchanges, wallets, and individual traders have increased in frequency and complexity.

The use of dark web marketplaces has made it easier for criminals to buy and sell stolen data, hacking tools, and even malware-as-a-service. This underground ecosystem allows threat actors to collaborate, further amplifying the scale of cybercrime operations.

The cyber threat landscape in 2024 is more diverse, sophisticated, and widespread than ever before. From ransomware attacks that hold organizations hostage to the growing threat of AI-driven exploits, businesses and individuals alike must be more vigilant and proactive in their approach to cybersecurity. Organizations should invest in advanced security solutions, regularly update their systems, conduct employee training, and implement a multi-layered defense strategy to protect themselves against these evolving threats.

■ DR. PARVEEN KUMAR & DR. RAJ KUMAR

Agriculture in the country suffers from a big disconnect. This disconnect is not related to non-adoption of sustainable technologies or recommended package of practice, but this disconnect is the reluctance on the part of younger generation to do farming. The youths do not perceive it as a dignified profession. Not only youth, the farmers' in the country also seemed to be disillusioned with farming. In a study conducted on 5,000 households across 18 states of India, results revealed that 76% of farmers wanted to give up farming. Imagining a condition in the near future, when neither farmers' nor youths will do farming. What will this lead to? It will lead to hunger, malnutrition, deaths and devastation. There are several factors attributable to this condition. Some of them include non-remunerativeness of this sector, lack of interest, non-farming aspirations and the resultant negative perception towards farming. Retaining youth in agriculture is thus a challenge and to tackle this challenge, there is a dire need to restore the confidence of the youth in this vocation. They have to be caught young. Indian Council of Agriculture Research (ICAR) has initiated a programme Attracting and Retaining Youth in Agriculture (ARYA). The ARYA is being implemented through various Krishi Vigyan Kendras (KVKs) all across the country. To further upgrade the skills and to convert them into successful entrepreneurs, the Government of India has also started various skills and entrepreneurship development programmes for the youths. Many of these youths have now started various employment generating units providing employment to many others. The ultimate aim of all these programmes is to transform youths from job seekers to job providers.

Considering the fact that future of farming and the country

lies with the youths and acknowledging that the progress of the nation can only be achieved when its youth stay in agriculture, KVK-Ramban has come up with a unique initiative. Under the leadership of Prof. B. N. Tripathi, Hon'ble Vice Chancellor and Prof. Amrith Vaid, Director Extension SKUAAS-T-Jammu. KVK-Ramban has started 'KVK-Student Connect' Programme. Conceived by Dr. Parveen Kumar SMS (Ag. Extension), the programme aims to bring the young innovative and virgin minds to fields. Students from different educational institutes are invited to visit and see various demonstration units of demonstration farm established at Dhalwas by KVK-Ramban. Deliberating upon the programme, Dr. Parveen Kumar told that based on principle of 'Seeing is believing', this initiative of KVK-Ramban comes with multiple benefits. Besides awareness and sensitization of the young minds regarding sustainable agricultural practices, this approach also helps to motivate them towards farming. In addition, the visit of students also offers them real-life field experiences that enhance learning process, making it more engaging, memorable, and practically applicable in their farming situations. It is much easy for the students to retain the things which they practically see, observe and understand instead of learning from books. Practical demonstrations on different practices are being done for the students to help them retain the knowledge gained and put that knowledge to practical use and in their day to day activities. Method demonstrations on various practices related to Natural farming and Organic Farming, and various resource conservation practices like farm ponds, mulching, intercropping, line sowing and demonstrations on how the animal and farm waste can be recycled into high quality organic manure through vermicomposting are among the various things they get to see and

know more. The crop cafeteria developed by KVK-Ramban on its integrated farm also has millets (Shree Anna). Students visiting the farm also get an opportunity to gain insights into these lost crops regarding their health benefits and climate resilience. Different vegetables especially the plants with bunch of chillies and brinjal hanging on them add to the joy and curiosity of these young visitors. Various devices installed at the farm are also something new for them. The yellow sticky trap for control of insect pests is something new for them. They are given detailed information on these traps also.

Dr. Raj Kumar Sr. Scientist and Nodal Officer KVK-Ramban told that this also gives an opportunity to the visiting students to raise queries regarding what they see and observe in the fields and all their queries are addressed by the KVK scientists. The students find the interventions like rain water harvesting through farm ponds and water conservation practices like mulching of much practical importance and use in their conditions. This is because district Ramban is largely a rainfed one with certain areas facing acute water scarcity in summer months making conditions very harsh. Dr. Raj Kumar further told that visiting students remain enthusiastic and curious, critically observing the different demonstration units of KVK-Ramban and enquiring about various things. Not only this, the students are also sensitized on various skill and entrepreneurship opportunities available in agriculture and allied sectors.

Their visit comes to an end with an earnest appeal to them to motivate their family members engaged in farming to adopt sustainable farming practices and also to go for individual micro level efforts to judiciously use and conserve the natural resources available on this planet before it is too late.

## Mental Scars of Tobacco and Substance Abuse

■ SYED MAJID GILANI

Are you aware of the alarming effects of tobacco abuse? The damaging impact of tobacco and allied products on human health is truly horrifying. Originally used for medicinal purposes, tobacco has become a destructive addiction with severe brain health consequences. The harm begins when nicotine enters the bloodstream, rapidly affecting the brain and leading to severe and long-lasting consequences, including irreversible damage to the brain, nerves, and heart, weakened immunity, tooth decay, gastric problems, and mood fluctuations. Prolonged tobacco or substance abuse only worsens these issues, resulting in diminished senses of taste and smell.

There is a common misconception that tobacco abuse offers temporary respite from worries and tensions. However, the reality is starkly different - tobacco abuse is detrimental to an individual's overall health. Substance abuse disorder, encompassing tobacco addiction, poses a significant threat to one's well-being, affecting the nervous system, mood regulation, perception, cognitive function,

and behaviour. This complex issue stems from a combination of factors, including genetic vulnerability, environmental stresses, social pressures, individual personality characteristics, and underlying psychiatric problems.

Some individuals struggle to control their substance abuse, ranging from moderate to severe symptoms. Addiction is the most severe form of substance abuse disorder. Individuals with substance abuse disorder often suffer from other mental health disorders. It is essential to realize that quitting substance abuse is quite possible, but it requires strong willpower, a positive approach, and unwavering determination.

Let us take a stand against substance abuse disorder. Together, we can raise awareness, provide support, and encourage treatment. Research reveals that substance abuse disorders and mental health disorders often occur together, with three possible reasons: common risk factors contributing to both substance abuse and mental disorders, certain genes being risk factors for both conditions, and environmental factors like stress or trauma causing genetic changes.

Mental disorders can contribute to substance abuse, as people with depression or anxiety turn to drugs for self-medication. Substance abuse worsens symptoms over time and triggers changes in brain structure and function. This is particularly concerning regarding chewable smokeless tobacco, such as spit tobacco, Ghutka, naswar, and pan-masala, which involves chewing finely powdered tobacco leaves or moist paste plugs and is mostly used in underprivileged sections and remote areas due to its affordability and availability.

In certain communities and geographical areas, smoking - whether cigarettes, bidi, hukka, or ghutka - are considered a cultural and social norm. In these environments, small children often emulate their parents' tobacco abuse, becoming vulnerable to addiction. Assuming addiction as normal, children rarely question their actions. Even when an addict parent attempts to prevent their children from smoking or substance abuse, they often disobey, as children typically mimic their parents' behaviour. Shockingly, entire

families in some households consume tobacco and its allied products, purchasing them regularly alongside essential items. Children inevitably follow suit. Furthermore, when children from such families are discouraged from consuming tobacco, their parents and elders often shield and brazenly justify their addiction. This alarming trend represents some of the worst parenting practices, perpetuating a cycle of addiction and harm, which ultimately perpetuates the cycle of tobacco abuse in our society.

To address these concerns, we must adopt a comprehensive approach that includes public awareness campaigns, reduced stigma, community outreach, and healthcare services. To safeguard our future generations, schools can play a pivotal role. Organizing awareness programs and campaigns at the grassroots level can effectively educate students about the dangers of tobacco and allied products. By working together, we can mitigate tobacco abuse and substance abuse disorder's devastating effects.

(The writer works as a GST Inspector for the Government of Jammu & Kashmir).

## What Types of Patients Are Coming to India for Treatment?

■ R.K. SINHA

Recently, Britain's King Charles visited India on a private trip with his wife, Queen Camilla. During their three-day stay, they stayed at a modern holistic health center near Bengaluru, where they participated in yoga, meditation sessions, and yoga therapy. This illustrates that even global elites, from ordinary patients to royalty, are realizing the benefits of seeking treatment from India's modern doctors and traditional healing methods to maintain good health and youthfulness.

In recent years, India has become a preferred destination for patients seeking treatment for heart diseases, bone disorders, kidney and liver transplants, dental care, cancer, and even conditions deemed incurable. Patients are coming not only from South Asian countries but also from Africa, Central Asia, Gulf nations, and even Western countries in the millions every year.

Alongside affordable and successful modern medical treatments, traditional Indian healing methods such as Ayurveda, yoga, naturopathy, dietetics, and millet-based therapies are gaining popularity among foreign patients. For instance, the daughter of Kenya's former Prime Minister, Raila Odinga, regained her vision after receiving treatment at Sreedhareeyam Ayurvedic Eye Hospital in Ernakulam, Kerala. This success led to a significant rise in patients from East Africa seeking Ayurvedic treatments in India.

During my frequent travels to Dehradun, I often encounter foreign tourists-men and women of all ages and professions-on flights and trains. Many of them are headed to ashrams or health centers in places like Haridwar, Rishikesh, and Dehradun for stays ranging from two weeks to three months. Their length of stay and the cost-often equivalent to or exceeding

luxury five-star hotel rates-depend on the severity of their condition and the treatment required.

In addition to traditional treatments, modern hospitals in cities like Delhi, Mumbai, Bengaluru, and Chandigarh are drawing a large number of international patients seeking cosmetic procedures to enhance their appearance. Plastic surgeons report seeing dozens of foreign patients each month for treatments such as burn injury repair, hair transplants, and skin-tightening procedures.

This trend represents a golden opportunity for India to attract more foreign patients. Medical tourism not only earns valuable foreign exchange but also supports local economies, as patients often arrive with caretakers who stay in hotels for weeks or months. Indian expatriates living abroad are also increasingly returning to India for affordable and high-quality medical care.

India's edge lies in offering top-tier pre- and post-surgical care at a fraction of the cost of similar services in Europe or the U.S. Cosmetic surgeons in India treat patients seeking procedures like fat reduction and skin tightening, as aging and environmental factors accelerate skin issues. With growing awareness of beauty treatments, both men and women are increasingly opting for cosmetic and surgical solutions.

Globally, millions of cosmetic surgeries are performed annually, with the U.S. being a leader in this sector. While initially popular among women, plastic surgery is now equally common among men. Broadly, plastic surgery can be divided into two categories: cosmetic surgery, which enhances appearance, and reconstructive surgery, which repairs damage from injuries, illnesses, or birth defects.

India, with its highly qualified medical professionals, advanced equipment, and

cost-effective treatments, is well-positioned to take a giant leap in medical tourism. Treatment costs in India are about one-fourth of those in the U.S., without compromising on quality. If India strategically strengthens this sector, patients will increasingly choose India over competitors like Thailand, Singapore, China, and Japan, which are also vying for medical tourists.

Medical tourism is a multi-billion-dollar industry globally. To secure a larger share, India must develop internationally accredited hospitals and clinics, provide specialized care in fields like cardiology, oncology, orthopedics, and transplantation, and embrace telemedicine and digital healthcare services.

India's millet-based therapies also offer a unique edge. Padma Shri awardee Dr. Khadar Wali claims that millet can cure even the most severe illnesses within six weeks to six months without any medication.

Such unique approaches, along with robust policy support from the government, can further elevate India's medical tourism potential.

Marketing campaigns, patient-centric packages, visa facilitation, language translation services, and accommodation arrangements can make India a more attractive destination for international patients.

The figures speak for themselves-14 lakh foreign patients came to India for treatment in 2022. To meet the ambitious target of attracting 1 crore international patients annually by 2030, India must ensure world-class healthcare services and develop specific areas of expertise. With proper planning and execution, India can establish itself as a global hub for medical tourism.

(The author is former Member of Parliament, Rajya Sabha).

## The Dark Reality of Mob Lynching in India

■ SANDEEP RANA

In recent years, mob lynching has emerged as a grave challenge to India's social fabric, threatening the principles of justice, equality, and the rule of law. Though not new, this form of violence has gained significant attention in the digital age, where videos of mob violence often go viral, leading to widespread outrage. This article delves into the causes, consequences, and potential solutions to curb the menace of mob lynching in India.

Mob lynching, the act of a group violently killing an individual without legal authority, is not unique to India. Historically, it traces its roots back to colonial and pre-colonial times, not only in India but globally, such as the infamous lynchings in the United States during the 19th and early 20th centuries. In India, the practice has evolved into a potent social and political tool, often targeting marginalized communities.

Causes Behind the Surge in Mob Lynchings

In India, religion-based violence has often been a tool for political mobilization. Lynching incidents frequently occur in the context of communal tensions, where rumors or misinformation regarding cow slaughter, beef consumption, or inter-religious relationships trigger violent mob reactions. This polarization is further exacerbated by political parties that leverage religious sentiments for electoral gains.

The rapid spread of misinformation on platforms like WhatsApp, Facebook, and Twitter plays a critical role in instigating mob violence. Fake news, doctored videos, and rumors often incite mobs to take immediate action without



verifying facts. The anonymity and reach of social media amplify the intensity of these incidents.

The inability or unwillingness of law enforcement agencies to prevent or respond swiftly to mob violence emboldens perpetrators. In some cases, police officers have been seen as complicit or slow to act, especially when the victims belong to marginalized communities. A lack of accountability fosters a culture of

impunity.

A slow and overburdened judicial system has led to declining public trust in legal mechanisms. People take the law into their own hands, believing that justice is either delayed or denied in formal courts. Mob justice becomes a quicker, albeit unlawful, alternative.

Economic distress, unemployment, and lack of education contribute to the rise in mob violence. Idle youth, frustrated by a lack of oppor-

tunities, are often manipulated by political actors to serve as pawns in larger communal agendas.

Consequences of Mob Lynching

Mob lynching erodes the social fabric of a diverse society like India. It fosters an atmosphere of fear, mistrust, and hostility among different communities, particularly affecting religious minorities.

The rise of mob violence is a direct challenge to the Indian Constitution and its commitment to upholding the rule of law. It undermines the authority of the state, signaling a shift towards a lawless society where might becomes right.

Victims, their families, and even witnesses of mob lynching suffer severe psychological trauma, which can lead to long-term mental health issues. The loss of faith in the system only deepens societal cynicism.

Proposed Solutions

Enacting a comprehensive anti-lynching law at the national level, with stringent punishments, is imperative. This should be supported by fast-track courts to ensure swift justice for victims.

Tech companies must collaborate with the government to curb the spread of fake news. Introducing penalties for platforms that fail to control misinformation and implementing AI tools for content moderation can help mitigate the issue.

Empowering police forces with training in crowd control and conflict resolution is essential. Establishing rapid-response teams can ensure timely intervention during incidents of mob violence.

Grassroots initiatives aimed at educating cit-

izens about the dangers of mob justice and the importance of communal harmony can help curb the rise of lynching. Civil society organizations, religious leaders, and local influencers can play a crucial role in this effort.

Political parties must refrain from using divisive rhetoric that fuels communal hatred. Holding politicians accountable for inflammatory speeches and actions can deter the use of mob violence as a political tool.

While India does not have specific anti-lynching laws, there are provisions in the Indian Penal Code (IPC) to address murder, rioting, and assault. However, these laws are often insufficient in dealing with the unique nature of mob lynching. The Supreme Court of India, in the *Thaseen S. Poonavalla vs. Union of India* case (2018), issued guidelines to curb mob violence, urging the government to enact specific laws to prevent lynching and protect victims. Despite these directives, enforcement remains weak.

Some states, such as West Bengal, Rajasthan, and Manipur, have enacted anti-lynching laws, but the lack of a uniform national law makes enforcement uneven across the country.

Mob lynching is a symptom of deeper socio-political issues plaguing Indian society. Addressing it requires a multi-pronged approach involving legal reforms, social awareness, and a commitment to upholding the rule of law. Only through collective efforts by the government, civil society, and citizens can India hope to eradicate the scourge of mob lynching and preserve its democratic ethos.

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