

REMEDY

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EDITOR'S NOTE

For the third year running, it has now become customary for the Journalism specialisation students of SCMC to bring out a special issue on Health. The past two years, the focus was predominantly on the Covid pandemic as the world was waiting with bated breath for a vaccine. The worst of the Covid pandemic is over, but its memories still seem to haunt us. In the aftermath, this issue carries four features relating to the Covid pandemic, including one on issues of mental health as a fallout of the infection.

Interestingly, a number of stories in this issue are not so much to do directly with medicine, but more to do with public health. There are features about the rise in cases of dengue, the impact of environmental degradation on health, the dangers of using non-stick cookware, and the issue of unregulated availability of hazardous drugs, and issues faced by the transgender community.

Issues that have been in the news have also found space in this issue – like the dismal working condition of India's ASHA health workers, the Supreme Court's decision on abortion rights, and malpractice by an Indian pharmaceutical company which led to deaths of children in Gambia.

Another issue of abiding concern – that of mental health – is also reflected in as many as four feature stories in this issue. There are two stories on the HPV vaccine.



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Maiden Pharmaceuticals' Gambia Scandal Highlights Systemic Failures

BY PRANITH YASA

Close to 70 children were reported to have died after purportedly drinking cough syrups manufactured by Maiden Pharmaceuticals

In September 2022, multiple reports of deaths in The Gambia caused by cough syrup consumption received attention. Close to 70 children were reported to have died after purportedly drinking cough syrups manufactured and exported by Maiden Pharmaceuticals, an Indian pharmaceutical company.

Global authorities took notice of the situation and the World Health Organisation (WHO) launched an investigation into the syrups, discovering that the four variants of paracetamol syrup distributed by the company contained toxic chemicals. Indian health officials conducted similar investigations and identified the company's Haryana factory as the source of these tainted products.

A Multitude of Complaints

A brief glance into Maiden Pharmaceuticals' history reveals that this isn't the first instance of alleged malpractice on behalf of the organisation. Over the past decade, the company has been identified by licensing bodies as a miscreant when it comes to following safety regulations.

Yet, the higher-ups of Maiden have got away scot-free, without suffering lasting consequences. This brings up the question – is third-party intervention the only reprieve for a pharmaceutical consumer?

Maiden Pharmaceuticals has seen multiple legal complaints lodged against its name. In 2011, the Bihar government placed Maiden Pharma on a blacklist after they were found to have sold sub-par products – methylethylmetrine and erythromycin stearate syrup.

The company also faced legal issues in Kerala in 2005, after a drug inspector reported quality violations. The case was brought to court in 2017, which resulted in Maiden being ordered to pay a minimal fine.

Local regulatory authorities in the states of Gujarat and Kerala have lodged numerous complaints against the company over the past decade, due to multiple infractions of quality standards and safe manufacturing practices.

Despite multiple purported instances of adulteration, sub-standard production and a disregard for safety standards, Maiden Pharmaceuticals has held on to its position. The company's official website highlights its "sincere efforts of practising and providing high-quality products" It continues to hold an ISO 9001:2000 certificate, which grants the company a seal of approval from national and international standardisation and regulatory bodies.

Ultimate Loser - The Consumer

It is evident that there is a systemic failure to protect vulnerable consumers from unscrupulous and harmful business practices. A significant issue in the evaluation of Maiden Pharmaceuticals' practices is the lack of communication between various authorities, including the state bodies and courts. Media visibility also plays an important role in holding pharmaceutical corporations accountable to the public.

Maiden Pharmaceuticals' actions highlight a fundamental issue within the pharmaceutical industry at large – corporations are no longer bound by rules and regulations, thus risking the lives of helpless consumers.



IMAGE COURTESY: Wikimedia Commons

A glance into Maiden Pharmaceuticals' history reveals that this isn't the first instance of alleged malpractice (Image used for representational purposes only)

Decoding SC's Ruling On Legal Status Of Abortions

BY JESSICA TRIVEDI

Are abortion rights in India finally more inclusive?

On September 29th, 2022, women's rights activists applauded the decision of India's Supreme Court, upholding a woman's right to abortion up to 24 weeks into her pregnancy, irrespective of her marital status. Asserting that a woman's marital status could not determine her the right to abortion, Supreme Court Justice DY Chandrachud (now Chief Justice) said, "Even an unmarried woman can undergo abortion up to 24 weeks on par with married women."

The bench of Justices Chandrachud, AS Bopanna, and B Pardiwala stated that if the concerned Act and rules were interpreted in a way that limited their benefits to married women only, it would perpetuate stereotypes and the widely-held belief that only married women engage in sexual activity and thus, legal recourse should only apply to them.

The decision came on the plea of a 25-year-old woman, who had claimed that her pregnancy was the result of a consenting relationship, but had not been successful in getting an abortion.

Political leaders and experts hailed the decision as a turning point for women's rights in India. Lok Sabha MP Mahua Moitra tweeted, "A huge step forward". Supreme Court lawyer Karuna Nundy called the ruling a landmark decision. The right to abortion has come under discussion globally, especially after the US Supreme Court's decision in the Roe v. Wade case earlier this year.

In India, the Medical Termination of Pregnancy (MTP) Act, 1971, had allowed married women, divorcees, widows, minors, "disabled and mentally-ill women" and survivors of sexual assault or rape to undergo abortion.

The Supreme Court's decision in September stated that a woman can decide whether to have an abortion or not on her own terms, free from outside interference or influence,



based on her unique life circumstances. A woman should have the "reproductive autonomy" to get an abortion without consulting a third-party, the court added.

Significantly, the apex court, in its order, also recognised that a husband's sexual assault of his wife qualifies as marital rape. Even though the law in India does not consider marital rape as a crime, the court's ruling sets the ball rolling for the change to be effected. "In an era that includes Dobbs v. Jackson and makes distinctions between the marital status of women who were raped, this excellent judgment on abortion under the MTP Act hits it out of the park," Karuna Nundy further wrote on Twitter.

Progressive changes in our country might be slow to come, with their execution often leaving a lot to be desired. But the Supreme Court judgment of September 2022 has set the foundation for various other progressive changes in the near future as far as women's rights are concerned.



India's HPV Vaccine: Concerns Remain

In a few months, Cervavac will be available across the country

BY PRANOTI ABHYANKAR

The Cervavac vaccine is a milestone in preventative healthcare in India. However, awareness and accessibility remain a concern.

India's first indigenously-developed HPV (Human Papillomavirus) vaccine, 'Cervavac', is a milestone in preventative healthcare in India. However, experts have opined that awareness and accessibility still remain low in the country.

The Role of HPV Vaccines

The Cervavac vaccine was created by Serum Institute of India, based in Pune. HPV vaccines, in general, not only work towards preventing cervical cancer but also protect the body from other infection-causing strains of HPV.

"HPV is a big family of viruses with different varieties. Some variants like HPV16 and HPV18 are linked with causing cancer, some others are linked with causing genital warts," said Dr. Tanaya Narendra, also known as Dr. Cuterus on Instagram and YouTube. "HPV is implicated with causing cancers of the cervix, mouth, oropharynx, and cancers in anus and penis," she pointed out.

The HPV vaccines can be categorised into three types based on the variants they target: bivalent (Cervarix), quadrivalent (Gardasil, Cervavac), and 9-valent (Gardasil 9).

Bridging Barriers for Trans Men

"Healthcare services lack a non-binary approach while providing healthcare to TM compared to cisgender women," says Navdeep Dhillon, a researcher who studies cervical cancer screenings for transmen.

"TM are recommended to take the vaccine even if they are undergoing hormone replacement therapy," said Dr. Vaishali Biniwale, a Pune-based doctor specialising in Obstetrics and Gynaecology. However, she also pointed out how a study should be conducted on the impact of Cervavac on TM before it is launched and distributed to doctors. "This will make the community feel safe about taking the vaccine, and Indian healthcare will take another step towards being inclusive," she added.

Impact on Non-Cervix Owners

People without a cervix are not at risk of getting cervical cancer. However, HPV and its variants are capable of causing other cancers and infections.

"We often link HPV only with cervical cancer, which is not the case. Besides, non-cervix owners can act as carriers so it's important for their health as well as the health of the people they are involved with," said Dr. Biniwale, highlighting the significance of Cervavac for non-cervix owners.

Although some countries have started pushing non-cervix owners to take HPV vaccines, Dr. Biniwale believes that India is not there yet and lacks a progressive mentality to spread awareness along these lines.

A Necessity for Sex Workers

HPV and its variants acquire the form of sexually-transmitted infections. People with multiple sexual partners are strongly encouraged to take the HPV vaccine which would protect them from contracting infections and cancers.

However, HPV awareness and accessibility run low among sex workers in India. "Sex workers in India do not have access to basic healthcare in the country, so getting HPV vaccines kind of sounds out of the question even though they are extremely necessary," Dr. Biniwale said.

Meanwhile, the Serum Institute believes in the likelihood of Cervavac being included in the National Immunization Program of the Union government, although it has not been announced officially.

Affordability Addressed?

Discussions surrounding sexual health are considered taboo in the country. Apart from awareness and accessibility, affordability was also a concern until Gardasil was used.

However, Cervavac, being indigenously developed, is expected to bring the cost down to Rs 200-400 per dose, according to Adar Poonawala, the CEO of Serum Institute. "The vaccine will be available for use in a few months once the prices and manufacturing are approved by the Government of India," he had said earlier.

Tracing The Trajectory Of The Monkeypox Outbreak

India became the tenth country to report a confirmed monkeypox case on July 14th, 2022.

BY ADITI KRISHNAN

Two years on from the onset of one of the deadliest pandemics, the world saw the resurgence of another viral disease – monkeypox. What made the 2022 outbreak peculiar was that monkeypox was previously believed to be endemic in Central and West Africa but had now spread outside that region for the first time.

In May 2022, the first case was detected in London. With the number of cases on the rise in an increasing number of countries in the subsequent months, the World Health Organisation (WHO) declared the outbreak a Public Health Emergency of International Concern (PHEIC), and as of October, there have been over 73,000 confirmed cases in over 109 countries.

The Indian Timeline

Through all this, monkeypox found its way to India as well. India became the tenth country to report a confirmed monkeypox case on July 14th, 2022, when a 35-year-old male returned to Kerala from the UAE. Since then, India has reported 19 cases, the most recent one reported on October 25th.

The number of cases in India has been minuscule as compared to countries like the US. When cases started showing up, doctors urged people to avoid panicking since the fatality rate is much lower than for other viruses. It has been found that smallpox vaccines are 85% effective in preventing monkeypox, so people who are vaccinated have a lower chance of contracting it. Doctors have also speculated about whether the cause of monkeypox's resurgence has been the discontinuation of smallpox vaccination.

The viral disease has been largely contained to a specific demographic: gay and bisexual men. But when the WHO said that men who have sex with men (MSM) should consider limiting their sexual partners, the number of cases started declining.

The past few months have seen a significant decline in the number of cases in countries like the US.

Can it Become a Pandemic?

Even though the monkeypox outbreak has been declared a PHEIC, the chances of it becoming a pandemic are very low.

When compared to the COVID-19 pandemic and its spread, monkeypox requires direct skin-to-skin contact with an infected individual. This implies that its rate of transfer and spread is much slower than that of COVID-19. Unlike the coronavirus, monkeypox cannot be transferred onto a person through an asymptomatic individual, which implies that the chances of it going undetected are also minimal.

The COVID-19 pandemic has also helped strengthen the healthcare and disease surveillance system throughout the world, which aided countries in being better prepared for diseases like monkeypox. And since it's a known virus, it's been easier for public health organisations to respond to it. The Ministry of Health and Family Welfare released guidelines on the detection and management of the virus, including early detection, contact tracing, and isolation of contact.

Lastly, with a fatality rate of 3-6%, monkeypox is not a very deadly disease. With smallpox vaccines already being effective in preventing monkeypox, the chances of it becoming a pandemic of gigantic proportions have become even more unlikely.



A test sample for Monkeypox

Dengue Patients: Ultimate Loser In Blame-Game

BY PRATISHTHA BAGAI

The rise of Dengue cases in India has caused much distress to patients who are not able to get their insurance claims approved.

Data suggests, every year approximately 33 million dengue cases occur in India. This accounts for one-third of the worldwide dengue burden.

September to October is the peak of dengue season, wherein both cases and deaths are the highest each year. During this period, dengue patients fall prey to exploitation, bearing huge medical expenses without getting their claims approved by medical insurance agencies.

The hospital administrations blame the insurance agencies for not approving the claims, while the insurance agents point their fingers at the hospitals for unnecessary admissions and medical expenses. The blame-game never ends, and ultimately, huge medical bills are borne by the already distressed patients who can do nothing and find themselves helpless and cheated.

The Distress of the Patients

Pranav Bagai of New Delhi was admitted to Holy Family Hospital in emergency post-midnight on September 27th after he tested positive for dengue alongside typhoid. His platelet count was constantly monitored and reported to be 1,60,000. After spending five days under medical care, he was discharged on October 2nd after much hassle as the TPA did not approve his case and asked the hospital to justify the admission against an OPD treatment based on the platelet count. As the hospital did not "justify the case," the parents of the patients had to bear all the medical expenses even after having an insurance policy.

Akhlesh Jat reported a similar case from Ahmedabad, wherein he was admitted for dengue, having a 103-degree fever, but was denied an insurance claim by a private insurance company for a platelet count above 1,00,000. He posted his grievance on LinkedIn, elaborating that the doctor reserves the right to decide if the admission was necessary, not the insurance company.

Insurance Companies' Argument

In an attempt to justify the insurance companies' stance to withhold the claims in both the above cases, LIC Agent Sanjay Singh compares hospitals to a shop and says, "Their focus is on selling as much of their services as possible, not ensuring the well-being of their patients. They will make unnecessary admissions, advise plasma therapies, ICU treatments, etc., whatever makes them more money as a business."

Bharat Lohia, Investment Planning Advisor from Meerut, also sided with the insurance agencies saying that they are always willing to assist their customers and only cases that are not genuine face claim issues. He mentioned that hospitals indulging in such activities get blacklisted by insurance companies, which affects the policyholders more. He suggested that IRDAI should impose penalties on hospitals as a more effective measure to curb the financial exploitation of patients over unjustified admissions.

Medical Perspective

Dr. Tannishtha Arora from Subharti Hospital brings the medical perspective to the table by stressing the severity of Dengue. Apart from high-grade fever, dengue poses a risk of blood loss from urine, nosebleed or vomit if not managed properly or early. dengue requires fluid replacement and constant platelet monitoring, for which the patient needs to be admitted. dengue is deadly, and a patient's life cannot be put at risk by neglecting symptoms and not having them admitted.

Dr. Manas Mitra of Max Hospital (Vaishali) adds to this argument by mentioning that the health condition of dengue patients is very unpredictable. Dengue patients are at a high risk of sudden collapse, and in some cases, the platelet count drops to critical within hours. Moreover, due to weakness, there is no scope for oral medication.



Aedes Aegypti, the Dengue Virus Vector



Despite UN Award For IHCI, Stroke Awareness Remains Low

A cardio-vascular health officer supporting health workers at a Health & Wellness Centre as part of IHCI.

BY ATHARV UNHALE

India accounts for 60% of global stroke cases, yet awareness remains alarmingly low.

The India Hypertension Control Initiative (IHCI) won a UN inter-agency award in September this year. Launched in 2017, it is a part of the Centre's strategy to mitigate mortality due to non-communicable diseases (NCDs) by 25% by 2025. Hypertension is also the most significant risk factor for ischemic strokes.

According to the American Stroke Association, an ischemic stroke occurs when the blood supply to a part of the brain is obstructed. It prevents the brain tissues from getting oxygen and nutrients, and cells begin to die in minutes. Strokes are a medical emergency. Immediate treatment is vital, and can reduce brain damage and other problems.

Strokes in India

India accounts for a whopping 60% of global stroke cases. It is the second-most common cause of death after Coronary Artery Disease (CAD). The period between 1996 and 2019 saw a 100% increase in stroke cases in the country.

However, awareness about strokes remains limited. A 2022 Boehringer Ingelheim survey found that less than one in four Indians are aware of the symptoms of a brain stroke. The number drops to only one in ten Indians when it comes to treatment options.

Dr. Anand Alurkar, a Pune-based neurologist, said, "Over the past few years, there have been more stroke cases in India. A better understanding of strokes will not only assist people to identify the condition, but also help save lives. Greater awareness of the disease, its symptoms, risk factors, and treatments is an imperative for the country."

The government implemented a strategy for strokes only in 2010 as part of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS).

But the programme has struggled to build awareness and curb the number of stroke cases in the country.

Diagnostics

An MRI is considered to be the gold standard for diagnosing a stroke. However, approximately only one MRI per million people are available in the country, with their high cost being an obstacle. Thus, diagnostics remains another big challenge for stroke care in India, especially in rural areas.

A recent promising development involved researchers at IIT Mandi developing a low-cost, portable device to detect ischemic strokes. However, it remains to be seen how it can be scaled to benefit the masses.

Burden on Caregivers

Strokes can also cause disability, leading to the patient requiring permanent care. Often, the burden of caregiving (and earning a living in case of loss of income) falls on women. There is currently no policy in place to support caregivers.

Dr. Madhumita Bhattacharjee, a researcher at Lilavati Hospital, has argued that stroke awareness should be taught right from the school level. "Strokes are largely caused by lifestyle issues like hypertension. If people are taught how to avoid strokes and identify symptoms early on, the disease burden will decrease substantially".

Think "FAST"

The American Stroke Association prescribes the following steps to identify signs of a stroke:

Face: Ask the person to smile. Does their face droop?

Arms: Can the person raise both arms? Do they have any trouble?

Speech: Can the person speak clearly and understand what you say?

Time: If you observe anything amiss as far as these steps are concerned, seek medical help immediately.

Cancer Awareness: The Need For Palliative Care

BY PARIDHI MAHESHWARI

The practice is of utmost significance in the context of the growing number of cancer patients, but not many know enough about it.

Palliative care is a very different approach than the traditional form of symptomatic care received at hospitals. Here, the primary goal of providing care isn't to treat or remove the problem. Instead, the focus is on improving the quality of life of patients who suffer life-threatening or terminal diseases. Palliative care aims to address suffering – physical, mental and emotional, rather than curing arising symptoms. This approach has been recognised under the human right to health. However, only 14% of those needing such care worldwide are estimated to have access to it.

Palliative Care in India

As per a recent data analysis by the Health Ministry released by the Federation of Indian Chambers of Commerce and Industry (FICCI), only 1-2% of India has access to palliative care. The practice, in fact, began in Gujarat back in 1980. Despite it not being a relatively new concept, several obstacles have led to a lack of awareness about it in the country. The most significant barrier has been limited national health-care policies and minimum institutional interest.

'99% of Patients Who Need it Are Ones Diagnosed With Cancer'



Vishranti Hospital



India stands third worldwide in terms of cancer incidence. In fact, the number of cancer cases in India are projected to increase to 29.8 million in the year 2025, as per ICMR. The cancer incidence in India for 2022 itself is close to 20 lakhs. Despite such alarming figures, most of the states have no palliative care policy. The burden of cost for cancer treatment is very high and unaffordable for around 80% of India's population.

How Can One Increase Awareness?

Vishranti Hospital, an in-patient care centre in Pune, is a small 15-bed hospital, that is free of cost and centred on palliative care. One of the hospital's doctors, Dr Alice, gave an insight into how palliative care awareness in the country is still at a nascent stage. "We receive requests for 2-3 cancer patients every single day," she said. In the small 15-bedded hospital, the burden of patients is huge and surprisingly, this is the only palliative care-centric hospital in Pune.

Dr Alice further spoke about how diseases like cancer have a stigma attached to it that makes the battle tougher for patients. The hospital has worked with patients who have undergone over 20 cycles of chemotherapy. "It is an extremely emotional and exhaustive process for any individual Symptomatic care that hospitals give is not enough to help a survivor get through the journey."

For economically backward classes, options like palliative care barely even exist. When asked about how one can increase awareness, Dr Alice said, "Doctors and hospitals which are responsible for the main treatment – be it surgery or chemo – should always inform the patient about all the options they have, and ensure to explain how this form of nursing and care works."

"As far as I know, there hasn't been much policy work at the central level regarding palliative care. The awareness about this treatment in India is negligible and restricted to a privileged class of people."

India Turns A Haven For Banned Drugs

Analgin and nimesulide are some of the drugs that have been banned in developed markets like USA and Europe.

BY UZMA AFREEN

A study published in 2020 states that the rate of adverse drug reaction reporting is less than 1% in India due lack of awareness.

In 2011, the Government of India banned the pediatric use of Nimesulide, a nonsteroidal anti-inflammatory drug, with pain and fever relieving properties.

Various countries like Finland, Switzerland, Spain, etc, had banned the drug as early as 2001 due to its adverse effects on the liver. India, on the other hand, continued to allow its usage for adults despite its hepatotoxicity for many years before joining the league of countries that imposed a ban.

Analgin, a painkiller and anti-pyretic drug, is another example of a drug banned in several markets, but used in India. The medicine is banned in countries including the US, Japan, Sweden, Canada, France and Australia. Developing countries like Nigeria and Nepal have also prohibited its usage. However, the medicine is easily available in India. The Indian government, in 2013, had decided to suspend the sale of Analgin after there were concerns raised from various quarters, especially the Parliamentary Standing Committee, highlighting its various side-effects. However, the ban was lifted a year later with an advisory for the companies to carry a warning on their package along with promotional literature specifying its usage, reported Business Standard.

DCGI, CDSCO and Drug Approval

The Central Drugs Standard Control Organisation (CDSCO) is a central drug authority under the Ministry of Health and Family Welfare that regulates the quality, safety, and efficacy of drugs. The CDSCO is responsible for clinical trials in the country, the approval of new drugs, as well as checking the quality of imported drugs. Section 26A of the Drugs and Cosmetics Act, 1940, empowers the organisation to ban a drug considered harmful or sub-therapeutic. The CDSCO is headed by the Drug Controller General of India (DCGI), who is the highest authority of the pharma regulatory framework in the country.

According to Prashant Reddy, co-author of The Truth Pill, the pharma companies need to submit a report on the tria-



ls and efficacy of drugs in order to unban the drugs. "This, however, has a lot of discrepancies as there is a lack of transparency," he said.

Low Manufacturing Cost

"Analgin is very cheap to manufacture and many Indian companies may, therefore, like to sell the product", Amit Sengupta, a medical practitioner and also the co-convenor of Jan Swasthya Abhiyan, told Business Standard.

There have been several instances where the ban on medicines was revoked with dosage warnings and no changes in composition. Analgin is one of them.

Lack of Data on Adverse Drug Reactions

According to the National Centre for Biotechnology Information (NCBI), adverse drug reaction (ADR) refers to any harmful effect due to the use of a medicinal product. ADR plays a very important role in determining whether a drug should be pulled off the shelves or not.

A study published in Authorea in 2020 states that the rate of ADR reporting is less than 1% in India due lack of awareness among healthcare professionals and patients. An NCBI study in 2014 cited a "dearth of research" claiming the presence of ADR in India.

"They don't have a proper system to collect data," Prashant Reddy stated, adding, "There is no transparency."

“The drug approval process in India is quite dodgy.”
-Prashant Reddy,
Co-author, The Truth Pill”

Drug Regulation In India: How It Fails The Citizen



Drug manufacturing in India is regulated by the Central Drugs Standard Control Organisation

BY SOHAM SHAH

The recent deaths of nearly 70 children in The Gambia due to the consumption of cough syrups made in India laid bare the systemic shortcomings of the sector.

Drug regulation in India is a topic that isn't written about often. It is a Pandora's box left untouched as there are few other areas that display the incompetence of a system towards its citizens.

The recent deaths of close to 70 children in The Gambia due to the consumption of cough syrups made in India laid bare the systemic shortcomings of the sector once again. "The state drug controller had given licences to the company only for export of these four drugs," India's Health Ministry had stated.

But what about lapses in India? In 2013, the Tamil Nadu Drug Control Administration, in a random drug inspection of Glipizide (a drug used to treat Type-2 diabetes), manufactured by Alfred Berg & Co Pvt Ltd, found that the tablet contained not Glipizide but Glibenclamide, a different drug. Though also used to treat Type-2 diabetes, Glibenclamide has a different metabolism rate which could lead to dangerous hypoglycemia. Upon visiting the manufacturing facility, authorities found that there was no quality assurance department, as required by law. They also found that the facility did not maintain quality control records. They could not even show the register of raw materials or packing.

Glibenclamide is almost five times cheaper to manufacture than Glipizide. A case was filed in the local court against Alfred Berg & Co Pvt Ltd under the Drugs and Cosmetics Act 1940, which carries a maximum penalty of life imprisonment along with huge fines. But the case has been languishing in court since 2014. This instance, recorded in Dinesh Thakur and Prashant Reddy's recent book – *The Truth Pill* – is one of the many controversies that have plagued India's drug and pharma sector.

AYUSH Drug Regulation

The drug regulation situation is even worse in the massive AYUSH drug market in India.

For instance, Giloy (*T. cordifolia*) is a herb endorsed by the AYUSH Ministry. A review article by researchers of NISER, Bhubaneswar, claimed that the herb has anti-diabetic, anti-periodic, antispasmodic, anti-inflammatory, anti-arthritis, anti-oxidant, anti-allergic, anti-stress, anti-leprotic, anti-cancer, anti-malarial, anti-HIV, hepatoprotective, immunomodulatory and anti-neoplastic activities. The claim of a single drug aiming to tackle multiple ailments has naturally led to several doubts being raised.

For instance, Kulkarni et al, in their multi-centre nation-wide study of giloy-induced liver injury, found "acute worsening of chronic liver disease or acute liver failure" among 43 patients who had consumed giloy. As such, Giloy has no proven benefits but there is preliminary evidence that it is causing liver injury.

Shortcomings in India's drug regulation ecosystem have come to light time and again. Recent revelations about discrepancies in the trial numbers of Covaxin by Bharat Biotech has widened the trust gap. The authorities must act.



Leaves of *T. cordifolia* or Giloy



India's **ASHA** Workers: Recognised But Exploited

BY AMBIKA ATUL BAPAT

In May 2022, the World Health Organization awarded ASHA workers the Global Health Leaders Award

Accredited social health activists or ASHA workers are frontline workers in the Indian public health system who act as a bridge between the government and the public. Constituted under the National Rural Health Mission 2005, ASHA workers are female volunteers – mainly in the age group 25–45 years – who act as community representatives and work with local Public Health Centres (PHCs) and other government organisations in the field of health and nutrition.

They are tasked with spreading awareness about maternal and child health, providing primary health care for minor diseases, disseminating information about hygiene and proper nutrition, implementing schemes related to health-care and so on. Their contribution has been recognised in making India polio-free and increasing its immunisation coverage. During the COVID-19 pandemic, they were given the extra responsibility to conduct surveys in households, spread awareness about basic precautionary measures, and contribute to the vaccination drive.

In May 2022, the World Health Organization (WHO) awarded ASHA workers the Global Health Leaders Award as a recognition 'for their outstanding contribution towards protecting and promoting health'. Having the ability to reach people in the remotest of areas and working at the grass-roots to implement many ambitious schemes, ASHAs have become an indispensable part of the public health system in India.

Challenges Remain Despite Recognition.

Despite the global recognition, many challenges faced by ASHA workers remain unresolved. They are underpaid, have no permanent job, have to work in poor working conditions and are required to carry out additional duties without any incentives.

During the Assembly elections in Uttar Pradesh, ASHAs were also put on election duty without any duty letter, due to which they did not receive any remuneration or incentive. The local Public Health Centres (PHCs) exploit them by issuing many verbal orders, and they do not get any incentives for those because these orders do not exist on paper.

Unlike other rural health workers like Anganwadi (AWW) and Auxiliary Nurse Midwife (ANM) workers, ASHAs do not have a fixed salary. They are paid on a task/activity-basis and incentives are provided for any additional duty. ASHAs are paid an average of Rs 10,000 per month, but have been demanding that it be increased to Rs 21,000 along with a government employee status. Announcement of an additional Rs 1,000 for COVID-related work was made, but that payment was also delayed. ASHA and Anganwadi workers have held many protests across the country, seeking better working conditions as a recognition for their efforts.

In India, where the quality of health and nutrition is low, the dissatisfaction among ASHA workers is alarming. Their role as an intermediary between government agencies and the public is crucial for developing a robust healthcare system in the country. Though recognition of ASHA workers was long due, it should be accompanied by a sustained effort by the society to resolve their concerns.



India's Unspoken Emergency: The Malnutrition Crisis

BY NANDINI TUPE

Government needs to understand the constraints that prevent nutrition-based initiatives from achieving their nutritional objectives.

An approximate of 20% of children in India below the age of five years suffer from wasting, often known as "poor weight-for-height," which is the most obvious and more often than not fatal type of malnutrition.

India is ranked 107th out of the 121 nations having enough data to compute the 2022 Global Hunger Index rankings. The country has a significant degree of hunger with a score of 29.1, and India's low ranking is mostly due to the country's high rates of child stunting and wasting. From 54.2% in 2000, child stunting in India has significantly decreased to 34.7% in 2020. However, it is still one of the worst in the world.

India's Response

The ministry has claimed that the index was based on a survey of public opinion. Additionally, in response to the alarming survey, further rejecting the GHI reports, the Ministry of Women and Child Development questioned the writers' objectives. The ministry stated that the inaccurate survey seems to falsely dismiss the initiatives presently in operation, the same also conclusively tainting the government's image globally.

The report's authors have made it clear that the GHI depends on data submitted by its members, including India. The methodology argument isn't resolved, however such arguments and discussions can play a crucial role in understanding and addressing the underlying causes for the issue as well as in making necessary developments in the pre-existing programmes and initiatives. With more information, such as that on food intake in households, the conversation about nutrition may become more detailed.

Cause of Crisis

According to data for India from 1991 to 2020, children from homes that experience a variety of kinds of hardship are

more likely to be stunted or wasted. These include a lack of food variety, poor maternal education, and poverty within households.

India already has two effective government programmes to combat malnutrition, the national health Mission and the Integrated Child Development Service, but both do not yet reach enough people. Additionally, the delivery system is weak and corrupt, with some researchers estimating that 40 percent of the food subsidies never make it to the intended users.

India already has two effective government programmes to combat malnutrition, the national health Mission and the Integrated Child Development Service, but both do not yet reach enough people. Additionally, the delivery system is weak and corrupt, with some researchers estimating that 40 percent of the food subsidies never make it to the intended users.

Measures Taken by Organisations

Through its numerous organisations, funding, and programmes, the UN collaborates with countries and individuals around the world to achieve the Sustainable Development Goals (SDGs), which include eliminating all kinds of hunger and malnutrition. To end hunger, poverty, and malnutrition, India must show the same adaptability and creativity. Together with its friends, the UN is addressing the health crisis and preventing it from turning into a food tragedy.

In addition to fighting hunger and food insecurity, the government must evaluate the nation's shortcomings. India has been fighting an ongoing battle because of its rapid population increase. A country's ageing population structure may gradually reduce the labour force needed for food production, hence reducing the amount of food available. This has caused the future development of food production to shift its emphasis from labour expansion to technological innovation.

Transgenders' Fight For Healthcare In A Pandemic

BY RANIYA ASHRAF ALI

The Right to Health: A Fundamental Right that remains elusive for most transgender individuals across the sub-continent.

The COVID-19 pandemic disrupted the lives of millions across the globe, and this was especially true in the case of the transgender community in India. Transgender individuals across India have long been victim to widespread ignorance and social stigma, exacerbating existing inequalities posed by their socio-economic vulnerability. The spread of the virus and, as a consequence, movement restrictions imposed by the nationwide lockdowns only added to their problems, pushing them deeper into the margins of society.



A transgender individual getting the COVID-19 vaccine in Sultanpuri, Delhi

Though the legislation passed in 2019 explicitly necessitated access for transgender persons in hospitals and other healthcare facilities, the failure to implement the Act has generated a lot of criticism. Gender sensitisation campaigns among healthcare professionals would lead to a reduction in unethical practices and better services for transgender individuals. The need to create gender-neutral, safe spaces in medical colleges and healthcare centres, which remain entrenched in the binary, is a must for the safety of transgender individuals.

A Rocky Road

Attaining healthcare security for transgender people is hampered by numerous barriers. There are very few transgender-friendly healthcare services in India. Healthcare

gender-friendly healthcare services in India. Healthcare professionals continue to diagnose gender incongruence with the person's ascribed sex as a mental disease. Transgender people have been hesitant to avail public healthcare facilities, worried that they may be victims, yet again to stigmatisation at the hands of healthcare workers, further discouraging them from reporting symptoms of the virus.

Impediments to access healthcare services are systemic; lack of documentation owing to the 2019 Transgender Person's (Protection of Rights) Act stripping away the individual's right to self-identify by compelling them to prove their gender identity to a District Magistrate. In light of the pandemic, many transgender individuals did not get vaccinated since photo ID proofs were required to register for the vaccination programme.

Moreover, many transgender individuals remained apprehensive of vaccination due to lack of awareness and lack of trans-representation in COVID-19 vaccine trials. Dr Aqsa Shaikh, a transgender activist and associate professor in the Department of Community Medicine at Hamdard Institute of Medical Sciences and Research, had suggested that vaccine awareness programmes with transgender representation could be the government's most concrete step towards immunising the community. She also pointed out that doubts about the vaccine's side-effects, especially for transgender individuals who'd undergone HRT, ART or gender-reaffirming surgery, worried many people.



Dr Aqsa Shaikh, who was appointed as the nodal officer for the COVID-19 vaccination Centre in HIMS, Delhi, a first for the transgender community in India.

An Approach to Inclusivity

Social isolation, discrimination, lack of food, funds and security left the transgender community in India distressed during the COVID-19 pandemic, raising concerns that have not been resolved to date. The community is vulnerable to challenges posed by their socio-economic status. However, the pandemic exacerbated these challenges, particularly with regard to healthcare. The growing concern was not just about the lack of healthcare facilities but also the lack of dialogue about the needs and inclusion of transgender individuals in the healthcare system.

Additionally, implementing the recommendation from the Ministry of Social Justice and Empowerment and organising vaccination drives and other health campaigns that specifically target the transgender community would garner a more positive response among individuals.



The Silent Pandemic: India Stares At A Crisis

BY ANANYANARAYAN DHANABALAN

The COVID-19 pandemic has unleashed a devastating mental health crisis and the global healthcare system is woefully underprepared.

According to a scientific brief published by the World Health Organisation (WHO) on 2 March 2022, the global prevalence of anxiety and depression increased by 25% in the first year of the COVID-19 pandemic.

The report enumerated the potential causes for the spike in cases and pointed to the groups of people who were at a higher risk of being diagnosed with such conditions. The report emphasised the need for countries to invest more resources into developing mental health infrastructure in their countries – pointing to the critical fact that on an average, countries spend just over 2% of their healthcare budget on mental health.

The Crisis in India

The post-COVID mental health crisis has appeared to hit India particularly hard. Access to mental health services has always been a problem as a 2016 National Mental Health Survey found that 83% of people with mental health problems did not have access to effective treatment. The COVID pandemic has exacerbated this issue as cases have skyrocketed, with nearly 10 crore cases of depression and anxiety in 2022.

Moreover, India has the highest number of suicides in the world, with nearly 500 lives lost each day in 2021. Suicide is also the leading cause of death for people in the age group 15-39.

In 2019, the WHO had estimated that India could lose up to \$1.03 trillion from 2012-2030 due to its mental health crisis, a number that is sure to have increased during the pandemic.

India is seriously undervaluing the threat, spending only 0.8% of the total health budget on mental health services, while biggest countries spend about 5-18%.

Access to mental health professionals is mostly limited to metropolitan cities. The country is woefully understaffed, with the number of psychiatrists and psychologists working in the country extremely low. The care available is also prohibitively expensive and the people who avail these services usually pay out of pocket due to negligible government assistance.

Steps in the Right Direction

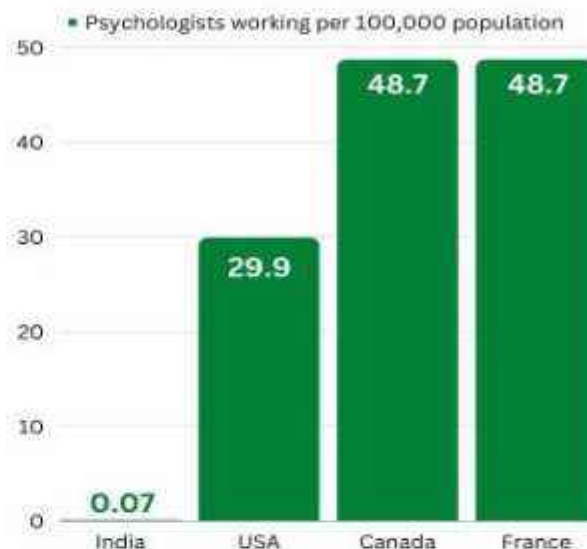
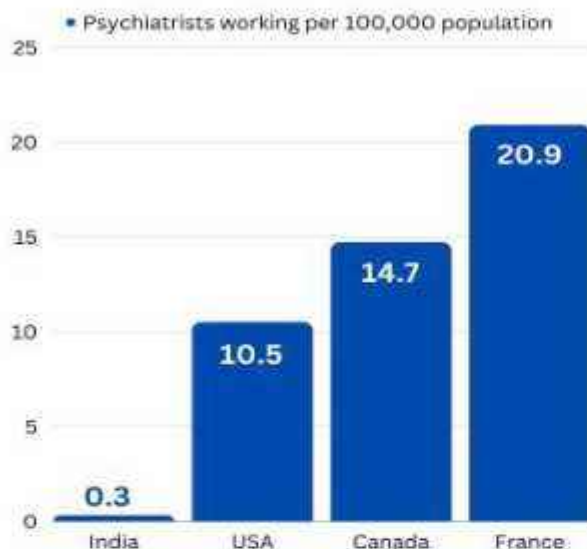
While there is still a very long way to go, there have been steps taken in the right direction.

While government spending on mental health services is still too low, it has been increasing in recent years. There are also several trained community health workers who work

in rural areas to try and address depression, anxiety, and suicidal tendencies.

The WHO also runs an online training program for community health workers so that they are prepared to offer mental health interventions in different conditions. The government has also announced a National Tele Mental Health program for phone-based counselling services.

Devika Kapoor, a practising counselling psychologist based in Mumbai, said, "Not only has there been a change in people's perception, but also there is an increase in help-seeking behaviour. It is sure that the shared experience of grief during COVID has contributed to this change. However, this change has largely remained in urban and semi-urban spaces while the rural areas have remained somewhat consistent."



The number of psychiatrists and psychologists working in India is extremely low. (Data from WHO/Canva Graph.)

India's Scoliosis Crisis Needs Attention

BY EESHA JAVADEKAR

Untreated scoliosis, a common birth and adolescent problem that affects 1 in 1000 people worldwide, affects approximately 2-3 percent of the Indian population.

With a prevalence of 1.34%, adolescent idiopathic scoliosis (AIS) is the most common spinal deformity, though the percentage of the population requiring treatment is significantly lower. Due to a variety of factors, India is home to a significant number of cases of spinal deformities.

Consanguinity, accidents, social violence, malnutrition, tuberculosis, post-polio complications, and congenital problems are the leading causes.

The exact cause of AIS is unknown, but hormonal, biomechanical, anthropometric, metabolic, growth and neuromuscular abnormalities are all potential contributors to the disease.

Insufficient Screening

Experts in scoliosis stress the importance of screening children for the disease at an early age, but doing so is difficult in India. Scoliosis, a congenital spinal curvature, can be detected on imaging tests like X-rays, MRIs, and CT scans.

Dr Saravanan Muniasamy, pediatrician and head of Rio Children's Hospital in Madurai, said: "Though congenital scoliosis is often detected, it is not part of our national newborn screening program or included in our routine check-ups for children."

If left untreated, many of these children go on to develop grotesque deformities which in addition to being disfiguring, can compromise the function of the lungs and the heart. With early recognition, these spinal deformities can be surgically corrected without significant risks.

However, when children present late with severe deformities, the surgical risks increase and in cases with heart and lung dysfunction, surgery may not be possible. In addition, it may not be possible to straighten the spine completely.



IMAGE COURTESY: Wikimedia Commons

At least five million people in India, or about 0.4 per cent of the population, have scoliosis. Most of it goes untreated

Therefore, it is often diagnosed when the curvature of the spine is already noticeable and severe. The slow degeneration of spinal discs typically causes scoliosis in adults. Scoliosis is often caused by neuromuscular weakness, which can result from an infection or disease other than the primary cause.

Dr Rajasekaran warned of the potential for many ancillary problems to arise in such a scenario, including decreased physical activity, increased blood pressure, and a decreased lung capacity.

Straightening The Curve

Even though idiopathic scoliosis can appear at any age, it most commonly affects those between the ages of 8 and 12, when it is known as adolescent scoliosis, and between the ages of 10 and 14, when it is known as juvenile scoliosis.

Scoliosis patients, particularly those in the adolescent years, "need to be monitored closely during this phase," when children experience a growth spurt, according to Dr Rajasekaran. Checking the curve's progression with regular X-rays is suggested.

There is a chance that the child will need surgery on his spine when they are an adult if the condition worsens. However, further spine curvature can be avoided if a scoliosis brace is used as soon as the disease is detected.

Treatment Cost

A scoliosis brace resembles a rigid plastic jacket worn around the chest, under the arms, and down to the hips. Straps secure it in place and aid in spine alignment. Braces in India can cost anywhere from Rs 15,000 to Rs 20,000, making them prohibitively expensive for the country's citizens.

Why PFAs Are Harmful ?

PFAs are present in everything we use- but these chemicals are much more sinister than they let on

BY ADITI IYER

You drink a glass of water, put on a puff of perfume, or grab some takeout – what do they all have in common? The presence of a dangerous chemical- PFA.

PFAs (poly-fluoro-alkyl substances), commonly called 'forever chemicals,' are a group of chemicals used to make products non-stick or stain-resistant. These chemicals are present in many common consumer products.

They are found in our clothes, cosmetics, fast food and water containers; they help repel oil and water. These chemicals are, however, more sinister than they let on.

Why are PFAs bad for us?

PFAs are made up of a carbon-fluorine bond, which is extremely difficult to break down. It is so strong that scientists cannot even estimate when 50% of a bond will break down. These chemicals enter our bodies for a prolonged period of time, which could cause adverse effects in large quantities.

The widespread use of PFAs, paired with how long it takes to break down, has resulted in the presence of the toxic chemicals in the blood of people and animals worldwide.

The Harmful Effects of PFAs

A rise in awareness about PFAs has only been a recent development, but were first discovered in the 1930's. PFAs primarily settle into the blood, kidney and liver. Scientists are conducting research into the potential adverse health impacts associated with prolonged exposure to PFAs, including decreased fertility and immunity, especially in children.

They disrupt hormones in people and animals and are carcinogenic (could potentially cause cancer). They are even more dangerous as they enter our drinking water sources as pointed out by the US' Agency for Toxic Substances and Disease Registry (ATSDR).

FLUOROS Global is an annual gathering of scientists and leading experts worldwide to share their latest findings and progress on science-based solutions for combating pollution caused by PFAs.

They conduct research on the harm that PFAs cause, how it disproportionately impacts developing countries and marginalized communities, and what are the measures that can be taken to reverse the effects of PFAs in our bodies and environment.



Scientists at the FLUOROS Global 2021 Convention

Combating PFAs

There has been an increasing concern about PFAs and its pervasive presence in our water. This has led to a rise in adopting efficient water filtration systems. People can effectively treat their drinking water by using granular activated carbon (GAC) and reverse osmosis (RO) filters.

Alternatives have also entered the market, such as wax or clay-coated materials. Such materials use polylactic acid (PLA), which is a biodegradable polymer.

The Increasing Relevance Of mRNA Vaccines



mRNA vaccines have heavily aided in the fight against the pandemic

BY MIMANSHA WALIA

The increasing usage and competitive advantages of mRNA vaccines over conventional vaccines are coming more into light after the pandemic fever.

Scientific advancements are constantly paving the way for serious advances in the field of vaccination. There are different types of vaccines used to treat different kinds of illnesses. mRNA is the next-generation vaccine that is based on gene-based research. It works with the cells to make proteins instead of introducing a piece of the virus to the immune system like conventional vaccines. Since its discovery in 1989, it has gone through multiple experiments and development, leading to healthy and profound results.

In the coming decades, however, the technique became impractical due to rapid climate change and unfavourable conditions.

mRNA Vaccine vs Traditional Vaccines

The booming success of the mRNA vaccine in such a short period of time can tell a lot about its efficacy, ease of production, flexibility, and level of immune response. It may differ for different illnesses, but compared to traditional vaccines, it has grown a benign reputation for saving time and preventing major side effects.

Starting with production time, while a traditional vaccine can take over a month or even a year to discern and form, an mRNA vaccine takes only about a week to be generated. The digital sequencing of the DNA, as opposed to the tiring process of collecting the virus, adapting it to lab requirements, and growing it, is much simpler and more viable for the researchers.

Moreover, the mRNA vaccine is safer to handle as one deals with a small batch of the virus to procure the DNA of the pathogen instead of growing large quantities of it. The absence of a live virus reduces the chances of causing sickness.

mRNA vaccine is more flexible as its production process is

more digital and can be scaled and standardized. It can also be made more accessible by digitally sharing the digital sequence of the DNA across different labs globally.

It acts as a catalyst in generating suitable proteins to trigger the correct immune response. With traditional vaccines, a piece of the virus is injected into one's body, and the immune system produces antibodies against it that prepares the body against similar viruses in the future. For this reason, traditional vaccines are more prone to causing severe illnesses.



Moderna COVID Vaccine: an mRNA Prodigy

The need to control highly contagious diseases was explicitly recognized after the COVID-19 pandemic, leading to some serious but required advancements in the field of vaccination. It accelerated the growth and development of mRNA vaccines, which have been researched for more than ten years. Moderna and BioNTech were among the first to obtain approval for their mRNA-based vaccines.

The Moderna COVID-19 vaccine uses mRNA that directs cells to produce copies of a protein called "spike protein" outside the coronavirus, which gets recognized by the immune system, stimulating an immune response. In such trying times, it helped save time and human resources with promising results and impressive production rates. With this technological breakthrough, more than 60% of the world's population received at least one dose of the COVID-19 vaccine, which helped control the pandemic, bringing today's reality to life.

Pääbo: The Enduring Legacy Of His Work

BY ARYA ZADE

The Neanderthal DNA enables scientists to pinpoint traits that distinguish modern humans from other hominins.

The Nobel Assembly at the Karolinska Institutet in October awarded this year's Nobel Prize in Physiology or Medicine to Svante Pääbo "for his discoveries concerning the genomes of extinct hominins and human evolution".

Innovative research by Dr. Pääbo aims to provide answers regarding human evolution. He was able to sequence the DNA of a type of human called Neanderthal, who lived and perished on the planet around 30,000 years ago. Denisova, a previously unknown hominid, was also discovered by him. (Members of the human ancestry known as hominins are extinct.) Following the journey out of Africa some 70,000 years ago, gene transfer occurred from these now-extinct hominins to Homo sapiens, according to Dr. Pääbo's findings, the Nobel Assembly pointed out.

Svante Pääbo's Research

According to the Nobel Assembly, Dr Pääbo was intrigued by the prospect of analysing Neanderthal DNA, but it was not a simple task. Over time, DNA is prone to deterioration and chemical change. Only minute amounts of the Neanderthals' DNA would have survived in the fossil record because they became extinct 30,000 years ago.

In 1990, Dr Pääbo was named professor at the University of Munich, where he carried on his investigation into the DNA of extinct human species. He decided to look at Neanderthal mitochondrial DNA at this moment. The "powerhouse of the cell," or organelle known as the mitochondria, contains DNA. Thousands of copies of the mitochondria genome exist despite being very small and only containing a small fraction of the genetic information in the cell.

This increases the likelihood of its sequencing becoming successful. From a 40,000-year-old bone, the geneticist was able to sequence a portion of the mitochondrial DNA succe



The 2022 Medicine Laureate: Svante Pääbo

fully, demonstrating the genetic distinction between Neanderthals and modern humans, as well as chimpanzees. In 2010, a study by Dr Pääbo on a draught Neanderthal genome sequence was published. He described the examination of 21 Neanderthal bones from Croatia's Vindija Caves by his team in the paper. Three bones were chosen for additional analysis after the bone powder from these specimens was analysed.

Relevance for Today's World

Svante Pääbo pioneering research has proven the significant impact of ancient gene sequences on the physiology of a modern day human being. One such example is that of the gene EPAS1, found in modern-day Tibetans and which helps in adaptability to higher altitude geographies. Another example is Neanderthal genes influencing how our immune system reacts to various pathogens. The work of Dr. Pääbo has in fact given an impetus to a completely new field of study – paleogenomics.

Dr Pääbo is now considered one of the pioneers of the field of paleogenetics, and for good reason. His work has not just illuminated the past in new ways, but also pointed out how our Neanderthal ancestry affects the present. His team garnered widespread attention in 2021 when it revealed that patients with a specific Neanderthal variation on the third chromosome were more likely to experience severe COVID-19. The 2022 medicine laureate



Can Sleep Deprivation Affect You Long-Term?

BY PUSHPANGI RAINA

Sleep issues shouldn't be ignored since they have serious public health repercussions.

The physiology of many different body systems, including the brain, depends heavily on sleep. But did you know that sleep deprivation is a common issue that keeps getting more frequent as people age?

According to the National Institutes of Health, 7% to 19% of adults reportedly do not get enough sleep, 40% fall asleep during the day at least once a month, and around 60 million Americans have sleep disorders.

Are You Sleep-Deprived?

The primary sign of sleep deprivation is excessive daytime tiredness, but there are other signs, such as depression and issues with memory or concentration. Poor sleeping environment, lifestyle choices, work shifts, using electronic devices right before you're about to sleep, and other medical conditions are all factors that can cause sleep deprivation.

1. Yawning
2. You keep dozing off
3. Grogginess
4. Poor concentration and irritation
5. Hyperactive behavior
6. Not ready to get out of bed in the morning
7. Tendency to emotionally explode

Consequences That Shouldn't be Ignored!

It's still not proven why we require sleep. But we do know that it can have devastating impacts if you don't get enough of it. Some of them are:

Obesity: Sleep deprivation affects the body's metabolism and eating habits over time. Evidence shows that the shorter the sleep, the greater the level of obesity.

Disorders: Disorientation, paranoia, and hallucinations are some symptoms that some people who are sleep deprived for long periods encounter.



IMAGE COURTESY: Amen Clinics

The primary sign of sleep deprivation is excessive daytime tiredness

Diabetes: Lack of sleep has been linked to problems with the body's ability to produce glucose and the quantity of insulin the body produces. People who get only 5-6 hours of sleep per night are about 1.7 times more likely to have diabetes.

Hypertension: According to several extensive epidemiological studies, sleep loss-related complaints are associated with heart attacks and stroke. Increased blood pressure, a faster heartbeat, and inflammation have all been linked to chronic sleep deprivation.

Stroke: According to research in an online issue of *Neurology* (2019) - those who reported sleeping nine or more hours each night had a 23% higher risk of stroke than those sleeping less than eight hours each night.

Anxiety and Depression: Sleep loss is associated with adverse effects on mood and behavior. Chronic sleep loss has been related to clinical depression. Anxiety and panic attacks are common for sleep-deprived people.

Slow Brain Functioning: When the brain doesn't get enough sleep, its ability to think efficiently, react quickly, and pay attention decreases. Our emotions will be all over the place, and our motor skills will be out of control.



A lack of sleep can induce anxiety

Long-term sleep deprivation can harm a person's mental health and well-being, social life, work life, and overall quality of life. It is advisable for anyone dealing with sleep deprivation to consider contacting a medical professional because, as common as this is becoming, it is just as unhealthy.

Vitiligo And The Stigma People Face

BY ASHMIT KUMAR

This skin ailment has caused various problems for the Indian people as they live in fear of being isolated from society.

Have you ever encountered a person with white patches spread across their skin and wondered how they got it? Have you ever questioned how Michael Jackson's skin colour transformed drastically over the years? The answer lies in a term titled vitiligo, a disease that causes the loss of skin colour when pigment-producing cells either stop functioning or die. It is just a skin condition and not associated with any physical symptoms.

The Stigma

India has the most prevalent cases of vitiligo, followed by Mexico and Japan. In a country like this, which still carries racist prejudices regarding beauty, where fairness is considered by many to be the epitome of beauty, vitiligo has much social stigma compared to other developed nations.

In many parts of India, due to a lack of education and deeply rooted superstitions, the condition is considered a 'punishment of past sins.' In a few religious texts where the concept of reincarnation exists, it is believed that a person who did "Guru Droh" in his previous life suffers from vitiligo in their existing life.

Dhaval Desai, an Indian doctor currently based in Georgia, spoke about how carrying two skin colours on one body resulted in reactions like gazing, questioning, staring and pointing a white patch out from people around him made him feel ostracized and isolated. People generally never really asked him what happened to his skin. If they did, he honestly didn't know how to answer them, so he would say, "Oh, they're just sunburned scars," or some version of that story, and move on.



Dr Dhaval Desai

Reducing The Stigma

In today's age, where science and facts are more available to people, many NGOs are taking strides to do their part in the fight against the vitiligo stigma. Shweta Association is a Vitiligo Support Group that considers a person associated with the disorder and their emotional and psychological needs. Composed of dermatologists, psychiatrists, ophthalmologists, the organisation helps people learn the scientific facts about the disorder and provides counselling to those in need.

Other people have chosen to rise and use their chosen platform to speak out. Ninu Galot, a UK-based Indian, was diagnosed with Vitiligo when she was 11 years old. In 2017, she enrolled in a fitness competition with a motive of educating people about vitiligo. After gaining success as a model, she used her platform to motivate other people affected by vitiligo and discourage the myths associated with it.



Santosh Gangwar, a Member Of Parliament

Benzene In Personal Care Products: Should You Be Worried?

Contamination by Benzene in products has been the cause of alarm globally

BY ROSHNI KUMAR

Over the recent years Benzene, a highly carcinogenic chemical has been found in personal care products in increasing amounts in the US. Traces of contamination were first discovered in suncare products, deodorants and antiperspirants. In response to the situation in the US the Indian FMCG major Hindustan Unilever issued an official statement that it does not manufacture dry shampoos or conditioners.



Benzene controversy

Benzene was recently found in dry shampoos and conditioners that were being manufactured by the US FMCG major Unilever. This led to the company voluntarily recalling their products they had manufactured prior to October 2021. This was done because an internal investigation revealed that these products contained high amounts of the chemical. This led to apprehensions amongst the consumers that they may have used some of the products of the recalled batches

To allay these fears Unilever US issued a statement to highlight that none of the recalled products had any adverse effects on their users and said that there were to report to substantiate the ill effects. They further clarified that the voluntary recalls done by them were as a precautionary measure.

Claims made by FDA and others

According to the US FDA Benzene is a health hazard and is ubiquitous in nature. It poses a threat to human life as it is believed to cause leukemia, anemia and other blood disorders as shown by earlier use of benzene. In fact it has since been revealed that benzene is harmful even when imbibed at low levels. In another report by FDA it is revealed that the root cause of Benzene contamination is due to the propellants used in aerosol products.

However it has now been highlighted that the US had banned the use of benzene in all products many decades ago however this did not deter the manufacturing lobby of consumer goods that continued to use Benzene in their products despite the government ban. The agency now has been called out for failing to protect the public and not adhering to the government ban. Prior to the incident FDA was asked to clarify the existing permissible benzene limits and carry out tests to ascertain their tolerable level of the chemical that may be permitted in the products. FDA subsequently carried out trials that established a limit of 2 ppm as permissible. Presently FDA states that it is monitoring the issue and has asked companies to stop using toxic substance like Benzene in their manufacturing.

Last year, an independent testing lab, Valisure, also claimed the detection of Benzene in several personal care products that were aerosol and spray based. Their findings also suggested that this contamination may have reached other products as well. Valisure also revealed the cause of the chemical contamination may have been due to manufacturing and supply chain problems. The lab's finding also prompted several major companies like Johnson & Johnson's, Procter & Gamble Co to recall many of their popular aerosol based products. Additionally various sources have revealed that it is difficult to narrow down and target a specific chemical that causes illnesses and how they end up affecting consumers remains a mystery.

Decoding The Rise Of Sports Psychology

BY ALLEN DAVID JAMES

With a rapid rise in sportspersons' monetary and worldly image, the role of mental conditioning for optimal performance becomes a necessity.

A sportspersons' career is defined by the drive to succeed and excel at a level above the rest. Greatness is a term gifted to those who, in the crunch moments, are able to execute complete control of mind and body, and emerge triumphant.

In an era defined by record viewerships and the monetary benefits that come with it, the expectations to excel are immensely high. The Indian Premier League, one the most prestigious and financially valued leagues in the world, has athletes aged 18-19 representing teams that have several stakeholders involved – from owners to sponsors to passionate fans, all of whom add to the weight of expectations.

The COVID-19 pandemic and its repercussions laid much-needed emphasis on the variable of mental well-being of a person/player – surviving through challenging and uncertain times, living in bubbles away from family, and the constant, often monotonous pursuit of peak performance – all amidst the usual scrutiny of the media and public. This is where the role of a sports psychologist comes into play, wherein the player has at their disposal a safe space to address doubts, striving to overcome them through whatever means necessary.

The current head coach of the Indian men's cricket team, Rahul Dravid, has been a staunch voice in support of the need for a sports psychologist or mental conditioning coach in the team's support staff. In a system that is run by two extremes: fear of failure and the glory of success, athletes need to be taught and conditioned from a young age in order to develop an understanding over time to achieve excellence. In an interview, Dravid mentioned how, with players bagging lucrative franchise deals early in their careers, there is a need for financial training and lessons on how to cope up with the rise in stature and fame.



The Weight of Success

The cricketing world has many examples of players who reached the pinnacle of success, but crumbled after failing to constantly compete and achieve a balanced state of mind.

Jonathan Trott, an English left-handed batsman who enjoyed widespread success in 2011, left the game after being unable to cope up with extreme pressure and constant competition. But perhaps the most relevant example would be that of Virat Kohli admitting after the agonising World Cup exit in 2019 that it felt like "the end of the world". The talisman has gone through one of his worst phases as a player, which he attributes to falling prey to the burdens of expectations and the desire to excel rather than be present and live through the experience.

Sports scientist executive and coach Paddy Upton, who worked with the 2011 World Cup winning Indian cricket team, has highlighted the upsides of mental strengthening and conditioning, and the numerous benefits it bestows through numerous anecdotes. These have highlighted the need for widespread changes in the coaching and management systems for players.

The adoption of electric buses is a step in the right direction. Union Minister Nitin Gadkari has been an advocate for flex-fuel engines and has emphasised on the need to revamp the entire public transport system to an electric base, along with increasing charging stations across the city. While the plan of action has been laid down, trouble arises when it comes to the execution.



Sex Education: Who Will Educate The Public?

BY IKSHAA DHODI

When people still consider sex a taboo, bollywood steps in to create awareness.

With the second largest population in the world, India still considers sex a taboo. Authorities find it hard to implement a strict sex education curriculum for children, and teachers find it hard to teach children about sex. This is when kids are left in the hands of the internet, prone to learn things that are not necessarily true, and can prove to be harmful to them as well as the people they are involved with.

The only way to break the taboo is to start talking about it. While NGOs have tried to talk about it in the past, there has not been much success. This is because according to the popular perception, sex is something that should happen behind closed doors and one should never talk about it.

Bad Days

When it comes to sex education, India has seen its bad days. In 2014, India's health minister announced that he wants a sex education ban and instead yoga should be made mandatory. There were times that the Rashtriya Swayamsevak Sangh (RSS) threatened violence against teachers who provided sex education. There was a sex education ban in many Indian states till 2018 when Prime Minister Narendra Modi rolled out a sex education programme.

Sex education also includes personal sexual hygiene. Periods are still a taboo in India and people are given pads in polythene bags till date to "hide" that they menstruate.

Media Steps In

With the governments having failed to provide the requisite sex education, the media, including Bollywood, has tried to step in on several occasions. Films have been made to educate the public about what sex means and how one can be safe while practicing sex.

One of the most popular films was Padman, sharing the message of menstrual hygiene to the general public. Released in 2018, it focuses on the real-life story of Arunachalam Muruganantham, who created cheap pads and sold them to women who could not afford the expensive pads that were sold in the market.

With his real-life contribution making a huge difference, this film popularised his story and his motto to the people. To date, many women in India end up using unhygienic clothes during their menstrual cycles, which can lead to serious diseases.

Another film that was released in 2022, Janhit Mein Jaari, was about how condoms prevent unwanted pregnancies and STDs. While not a huge hit, it aimed to emphasise on the need for condom-use and safe sex.

While the authorities have taken some steps to educate the public about sex, there is also a notion that kids should be taught about abstinence, rather than actually telling them how to practice safe sex.

With the government's role in sex education left wanting, we are left with the question – is it the responsibility of only the film industry to spread awareness about sex, or is it high-time for the government to assume responsibility and provide much-needed sex education?



Sex education has been found lacking in India. The authorities don't want to take action to educate the public.



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