

## The rise of zoonotic tuberculosis

In a study recently published in the Journal of Infectious Diseases, scientists illuminated a lesser-known variant of tuberculosis known as zoonotic tuberculosis (zTB). This type of TB stems from Mycobacterium tuberculosis complex (MTBC) species found in animals, posing a unique challenge to public health surveillance.

The study, which spanned over 25 years from 1995 to 2021 in Alberta, Canada, examined the cases of individuals infected with animal-lineage MTBC. What they found was both intriguing and concerning. Out of the 42 identified cases of zTB, M. bovis—originating primarily from cattle—was the most commonly identified culprit, accounting for 20 cases. However, the real surprise came with the discovery that M. orygis, previously less recognised, was responsible for 21 cases, indicating a potentially underestimated prevalence. Interestingly, while cases attributed to M. bovis remained steady over time, those linked to M. orygis saw a significant uptick post-2016, raising eyebrows among researchers.



Researchers delved deeper into the data and found that individuals infected with M. orygis tended to be older, predominantly female, and more likely to be undergoing immunosuppressive therapy compared to those infected with traditional M. tuberculosis. Furthermore, we traced all M. orygis cases back to individuals born in India or Pakistan, suggesting a potential geographical link.

The good news? All isolates, despite the surge in M. orygis cases, showed susceptibility to common antimycobacterial medications, offering hope for effective treatment. The absence of secondary transmission, which suggests that M. orygis caused zTB does not spread easily from person to person, may be the most reassuring finding. This study serves as a wake-up call, urging healthcare authorities to reevaluate their surveillance strategies and consider the evolving landscape of zoonotic tuberculosis. As zTB continues to fly under the radar, understanding its nuances is paramount to safeguarding public health and preventing future outbreaks.



## The multifaceted realities of kidney selling across the globe

STAR HEALTH DESK

Bijaya Shrestha, leading a team from the Centre for Research on Education, Health, and Social Science in Kathmandu, Nepal, has uncovered a disturbing reality in a groundbreaking study spanning over three decades of global medical research: the thriving trade in human kidneys. Published in the open-access journal PLOS Global Public Health, their findings offer a chilling glimpse into the myriad reasons why individuals resort to selling their vital organ, laying bare a complex tapestry of socioeconomic pressures, cultural norms, and personal struggles.

At its core, the issue revolves around a stark supply and demand imbalance. With the demand for kidney donations vastly outstripping supply, the organ trade has burgeoned into a lucrative global enterprise. What's more alarming is the exploitation of vulnerable individuals who find themselves trapped in a web of medical, social, psychological, and legal ramifications after parting ways with their kidneys. Peeling back the layers, Shrestha's

team unearthed a spectrum of motivations driving kidney sales. While poverty emerges as a leading force, the story is far from one-dimensional. Alongside economic hardship, factors such as debt, lack of information, and aspirations for material possessions like motorbikes or smartphones compel individuals to make this agonising choice. Some even see it as a ticket to financial independence or a selfless act of altruism.

Yet, the influence of societal expectations and familial pressures looms large. In many instances, individuals—especially men—succumb to the weight of cultural norms, selling their kidneys to meet obligations such as dowry payments. Meanwhile, women may find themselves coerced into selling kidneys due to the physical demands placed on men within their communities.

Geographically, the landscape of kidney sales varies, reflecting the unique socio-economic conditions of different regions. In the Indian Subcontinent, poverty reigns supreme as the driving force, while

countries like Bangladesh, Nepal, India, and the Philippines grapple with the pervasive influence of brokers who facilitate organ transactions. Shockingly, the presence of advanced medical facilities in certain urban centres inadvertently fuels the organ trade by serving as hubs for connecting donors with recipients.

Despite the gravity of the situation, the study exposes gaping holes in existing policies aimed at combating kidney selling and cross-border organ trafficking. The vicious cycle of exploitation and suffering will continue unabated without urgent intervention.

In conclusion, the findings of this study paint a sobering portrait of the multifaceted nature of kidney selling. While economic hardship may lay the groundwork, a deeper dive reveals a complex interplay of social, cultural, and personal factors propelling individuals towards this dire choice. It is a clarion call for decisive action, demanding robust policy measures and global collaboration to stamp out this egregious violation of human dignity and protect the most vulnerable members of society.

## HAVE A NICE DAY Cultivating happiness

DR RUBAUL MURSHED

Significant associations exist between the power of practicing kindness and psychological well-being.

Greater happiness is associated with the broader concept of well-being. It includes mainly meaningful relationships, a sense of purpose, and better physical health. Eventually, kindness emerges as the most essential recipe for happiness. Moreover, happiness is the ultimate goal that most people strive for. Besides technological advancement and economic growth, there is an increasing call to prioritise kindness and acknowledge the kind-hearted individuals around us.

This emphasis can help improve our surroundings. Consequently, exploring the subject of 'kindness and psychological well-being' and its relation to physical benefits becomes vital. Among the consequences of the post-COVID pandemic, the present worldwide unrest, and geopolitical conflicts, the importance of kindness and its impact on the well-being of the civilian population are some of the most significant issues. Kindness is not weakness; it is a power.

E-mail: rubaulmurshed@shomman.org



## We never know the worth of water till the well is dry



DR AHMED AHBAB SHAMO

This is a very well-known proverb that has come a long way since the beginning of mankind. We humans have always proved the validity of this statement through our very own natural instincts.

Although we may have used the well and the water as references here, we can recognise their authenticity when we examine ourselves, specifically our teeth. We only care about our teeth when it is too late and the pain is intolerable.

If we take a close look at our daily food habits, we often find ourselves indulging in the sugary rush of chocolates, soft drinks, chips, and beverages containing sugar. These are what we call cariogenic snacks or foods. Meaning they have the capability to cause caries and damage the tooth.

Enamel is the outermost layer of our teeth. Any dental disease, particularly caries, initially targets the enamel. Caries initially demineralises. The enamel begins to penetrate deeply into the inner layers of our teeth. This initial caries, if left untreated for a very long time, causes the formation of a very large cavity on the tooth surface.

Through this cavity, the nerve fibres present in the tooth come out and become exposed to the outer environment. This exposure to nerves causes excruciating pain for the patient. However, most patients tend to take painkillers and endure the pain for several days. Consequently, the infection spreads to the root of the affected tooth. Additionally, the gum beneath the tooth swells.

Most of the time, pus fills the area, and other discharges are visible. In this condition, when the patient visits the dentist, he or she has no other option except to undergo a root canal treatment in order to fix the tooth. The doctor then has to remove the already-dead nerve fibre and the leftover infected tooth tissue.

The patient's ignorance necessitated the sacrifice of an intact tooth. So each and every one of us should always keep in mind to visit the dentist as soon as there are any difficulties with our teeth. Along with this, everyone should develop the habit of brushing their teeth twice daily, once before going to sleep and another one in the morning after having breakfast, along with regular flossing.

Especially during this holy month of Ramadan, everyone should be conscious of their oral hygiene. We can prevent any kind of dental problem or oral disease if we can maintain good oral health by adhering to the right guidelines, doing it correctly, and visiting the dentist on a regular basis every six months.

The writer is an Honorary Medical Officer at Dhaka Dental College. Email: ahmedahbabshamo@gmail.com

## Exploring the connection between premenstrual disorders and perinatal depression

A recent study published in the open-access journal PLOS Medicine highlights a compelling link between premenstrual disorders and perinatal depression in women. Qian Yang and colleagues from the Karolinska Institutet in Sweden and the University of Iceland conducted the research, revealing intriguing findings that delve into the intricate relationship between these two conditions.

According to the study, women affected by premenstrual disorders face a heightened risk of perinatal depression compared to those who do not experience such issues.



What is particularly noteworthy is that this connection works both ways: women experiencing perinatal depression are also more prone to developing premenstrual disorders following pregnancy and childbirth. This suggests a potential common mechanism contributing to the onset of both conditions. The research draws on data from Swedish national registers spanning nearly two decades, encompassing over 900,000 pregnancies.

Among the key findings, they observed that women with perinatal depression were significantly more likely to have experienced premenstrual disorders before pregnancy.

Furthermore, they were twice as likely to report such issues when menstruation resumed after childbirth, compared to women unaffected by perinatal depression.

These findings shed light on the complex interplay between hormonal fluctuations and mental health among women. By identifying this bidirectional relationship, the study underscores the importance of recognising and addressing these susceptibilities in clinical practice.

It suggests that both premenstrual disorders and perinatal depression may exist on a continuum, emphasising the need for tailored support and intervention strategies. In essence, this research not only deepens our understanding of the link between hormonal changes and mental well-being, but also holds significant implications for healthcare providers in better targeting support for women at risk of these conditions.



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