

2024: A YEAR OF TRANSFORMATION

The year 2024 was a significant one for India, marked by notable political events, sporting achievements, and progress in science and technology. The year also saw social, economic, and environmental advancements that reflected India's growing role on the global stage.

 $2024~\mathrm{was}$ a crucial year for Indian politics, primarily due to the general elections, which took place amid a highly polarized political climate. The Bharatiya Janata Party (BJP), led by Prime Minister Narendra Modi, faced a strong challenge from a united opposition front. Modi's government focused heavily on national security, economic reforms, and technological advancements.

India's sporting calendar in 2024 was marked by numerous remarkable performances. Cricket remained at the forefront, with the ICC Men's T20 World Cup being one of the year's biggest highlights. India, as the host country, delivered an exciting tournament, with the Indian team making it to the semi-finals. In football, India's performance in international competitions continued to improve, with the national team seeing better rankings and performances in regional tournaments. The 2024 Summer Olympics in Paris were another high point for Indian sports, with Neeraj Chopra defending his Olympic gold in javelin throw, cementing his place as one of India's greatest athletes. Other athletes like Mirabai Chanu (weightlifting), Lovlina Borgohain (boxing), and PV Sindhu (badminton) continued to shine on the global stage, with several athletes making it to the podium in their respective disciplines.

India continued to make strides in science and technology in 2024. The space sector saw remarkable achievements, with ISRO successfully launching its Chandrayaan-3 mission to the Moon, followed by the Aditya-L1 mission, India's first solar observatory. These missions underscored India's growing capabilities in space exploration, contributing to global scientific knowledge.

The Indian tech industry also saw rapid growth, especially in artificial intelligence (AI), machine learning (ML), and quantum computing. India became home to some of the world's most innovative startups, particularly in FinTech and HealthTech. 5G technology was rolled out across major cities, enhancing connectivity, improving digital infrastructure, and enabling the growth of smart cities

these

soon

I slept and dreamt that life was joy. I awoke and saw that life was service. I acted and behold, service -Rabindranath Tagore was joy.

India's Progress in Global Rankings in 2024

-ndia is today world's fifth-largest economy and we are confidently advancing toward the goal of becoming the third-largest economy. India's determination to be competitive and play a significant role in the global arena has been evident through its remarkable improvements in various global rankings over the past decade. Under Prime Minister Narendra Modi's leadership, the country has made substantial strides in sectors ranging from logistics to innovation, security, and cyber security. These achievements over the last ten years are not just about improved rankings but about reimagining India's role in the global order.

A leap of 42 ranks in the Ease of Doing Business index between 2015 and 2018 positioned India as an investment-friendly destination with a business climate marked by fewer compliances and greater opportunities. Similarly, India's jump from 71st in 2014 to 39th in 2018 on the Global Competitiveness Index highlighted advancements in infrastructure, market size, and innovation. In 2022, India's aviation safety oversight mechanism made a quantum leap to the 48th spot, up from 102nd, surpassing countries like China, Israel, and Denmark. These milestones are a testament to India's consistent efforts to strengthen its global standing and competitiveness.

In 2024, India's meteoric rise on the global stage has been nothing short of remarkable, with key rankings and achievements showcasing its growing influence. From securing a spot among the top four nations with the largest foreign exchange reserves to climbing the ranks in the Global Innovation Index, India's progress under PM Modi's leadership has been transformative.

Economic Growth & Foreign Reserves

India's economic growth trajectory under the leadership of PM Modi has been spectacular. India's trade efficiency has increased with India's jump in the Logistics Performance Index 2023 improving by a

remarkable 16 places, now ranking 38th out of 139 countries. This leap underscores India's growing strength in trade and infrastructure. Also, India has surpassed many developed nations in terms of ship-turnaround time becoming a becoming a major centre of global trade. There has been an increase in port capacity, investment in port infrastructure, and improved connectivity of ports under the Sagarmala Project. The turnaround time for ships at India's major ports has come down by as much as 48.65 per cent from 93.59 hours in 2013-14 to 48.06 hours in 2023-24 Adding to this, India has crossed an extraordinary milestone its foreign exchange reserves have surged past USD 700 billion, placing the nation at the 4th position globally, just behind China, Japan, and Switzerland. In another impressive achievement, India's rise in the Global Competitiveness Index 2024 to 39th position highlights the government's relentless focus on economic reforms, making India a formidable player in the global market.

Over the last $\bar{d}ecade$ (April 2014 to September 2024), total FDI inflows amounted to \$709.84 billion, accounting for 68.69% of the overall FDI inflow in the past 24 years. In 2024, India became the world's secondlargest producer of crude steel, after China. It also secured the second position globally in mobile phone production, solidifying its status as a major manufacturing hub.

Emerging as an Innovation Leader

The Global Innovation Index 2024 is a clear reflection of this progress, as India has surged to the 39th position, up from 81st in 2015, showcasing the country's transformation into a global hub for innovation. Further enhancing its technological stature, India climbed 11 spots in the Network Readiness Index 2024, now ranking among the Top 50 countries. India was ranked 1st in AI talent and ICT services exports, 1st in AI scientific publications, 2nd in FTTH subscriptions and mobile internet traffic, and 3rd in domestic

market scale. This leap underscores the government's efforts to strengthen digital infrastructure. India secures position in top 10 countries in Patents, Trademarks, and Industrial Designs: WIPO 2024 Report, reaffirming the nation's growing leadership in intellectual property and its pivotal role in driving technological advancements. Not only this, India ranks 7th globally in "intangible asset intensity," highlighting the strength of its non-physical assets such as patents and trademarks.

India's Higher Education Gets Global Recognition

India's education sector is experiencing remarkable growth, with the nation making significant strides in global academic rankings. The QS World University Rankings: Asia 2025 highlights India's increasing prominence, with 7 of its institutes now ranked in the Top 100 in Asia. Not only this, India also became the most represented countryin QS Rankings twice in a row with 162 universities listed out of 984 institutions, surpassing Japan (115) and China (135). This achievement reflects the country's commitment to providing world-class education and fostering research excellence. Institutions like IITs and IIMs are setting high standards, in India and on global scale. With ongoing focus on improving educational infrastructure and fostering innovation, India is poised to become a leading hub for higher education.

India Prioritising Cybersecurity

India's digital infrastructure has grown rapidly over the years, and its achievement in the Global Cybersecurity Index 2024, securing Tier 1 status, underscores this transformation. India scored 98.49 out of 100 which places India among the top countries in the world for cybersecurity readiness. This milestone reflects the government's ongoing focus on creating a secure digital environment for businesses and citizens. The Modi government's emphasis on building strong cybersecurity frameworks

can be seen through initiatives like Digital India, which not only expanded internet access but also introduced measures to enhance online security. Past efforts, such as the establishment of the NCIIPC and I4C, have played key roles in strengthening the nation's cyber defense, positioning India as a leader in the global cybersecurity landscape

Gender Equality

EDITORIAL

India's remarkable progress in gender equality is evident in the 2022 Gender Inequality Index, where the country moved up 14 places, improving from 122nd in 2021 to 108th. This progress reflects Modi government's strong commitment to women's empowerment through initiatives like Beti Bachao Beti Padhao, which focuses on education, healthcare, and women's safety. As of 2023-2024, India continues to make strides, with more women participating in the workforce and political leadership roles. PM Modi's vision for a more inclusive society is driving these changes, ensuring that women's contributions are increasingly recognized and supported across all sectors. A Flourishing Tourism Sector

India's tourism sector has flourished, ranking 39th in the Travel and Tourism Development Index (TTDI) 2024 Initiatives like Incredible India and Dekho Apna Desh have boosted both domestic and international tourism, showcasing India's rich cultural and natural heritage. In 2024, Prime Minister Mr. Narendra Modi inaugurates 52 tourism sector projects valued at over Rs. 1400 crore (US\$ 168.5 million) under the Swadesh Darshan and PRASHAD Scheme. India has risen to 3rd place in the Asia Power Index 2024, surpassing Japan. This reflects India's growing regional influence, driven by strategies like the Act East Policy and active leadership in global forums. Under Modi's leadership, India's presence and power on the global stage continue to strengthen.

HOROSCOPE 2025

DR NEHA SHIVGOTRA



your spirits high!

Taurus: Embrace the transformative power of self-forgiveness, allowing yourself to release the burdens of past guilt. It is time to welcome a more refined and

resilient version of yourself, as brighter days await on the horizon.

Gemini: Refrain from excessive toil or attempting to compensate through material means. Allow yourself a moment to pause, rejuvenate, and savor the tranquility and happiness that life offers. Achieving balance is essential for the longevity of your successes.

Cancer: Your intuition is remarkably potent and trustworthy at this moment. Rely on your inner wisdom, for it will lead you true. As long as you remain dedicated to your journey, success will follow. Here's to a more enriching future ahead

Leo: A wave of opulence is approaching your life. Your dedication and strategic vision will vield prosperity, bestowing upon you a profound sense of security and optimism for what lies ahead. Remain receptive to the myriad blessings that resonate with your aspirations. **Virgo:** within you lies the awareness that a grander destiny awaits, and

your celestial guardians have been subtly steering you in that direction. This year, embrace the choice to unlock your true potential and harmonize with your divine life's calling. Libra: It's essential for you to seize

control and embrace your personal

strength in this situation. Now is the moment to take initiative and pursue your goals with clear vision, bravery, and unwavering self-assurance.

Scorpio: Your celestial guardians wish to assure you that they are acutely aware of the challenges currently confronting you. Although the circumstances may seem daunting, have faith that a transformation is on the way. It may require time and dedication, yet the effort you invest will yield rewarding results. Remain patient and optimistic, for brighter days are surely approaching.

Sagittarius: Your Angels urge you to

prioritize your well-being and embrace more conscious, nourishing choices. While this journey may demand time and dedication, the rewards of your efforts will be invaluable. Release unhealthy habits, and you will discover a newfound sense of energy and equilibrium. Trust in your intuition as you navigate this transformative path. Capricorn: Embrace authenticity

and discern your genuine desires. Elevate yourself to realize your fullest potential and harmonize with a radiant, fulfilling future. Cultivating mindfulness will be essential this year.

Aquarius: The divine often holds

joys for us that surpass our wildest dreams. Embrace the idea that you are worthy of even greater blessings than you currently seek. Allow your Angels to lead you toward a fresh and thrilling path.

Pisces: A remarkable transformation in energy approaches, and it is vital for you to welcome it to cultivate peace and harmony in your life and relationships. This year, engage in a go-to activity such as drawing, listening to music, or dancing, which will effortlessly redirect your focus.

(The author is an Astrologer & Numerologist)

Kalari-The Dogra Cuisine

DR BANARSI LAL

alari is a popular local milk-byproduct delicacy of J&K.It is mostly found in the areas of Shivalik hills of Jammu region particularly in Udhampur distt.of J&K. Livestock is emerging as an important sector in the economy of Union Territory of Jammu and Kashmir. This sector plays an important role in the socio-economic development of the farmers of J&K. In Jammu and Kashmir the number of animals per 1000 human beings are 882 while at national this number is only 457 as per livestock census2007.But even then the milk and milk production in J&K is low. In the Union Territory of Jammu and Kashmir about 80% of population lives in the rural people and about 60% of the UT's revenue is generated by the agriculture and animal husbandry sector. Dairy farming is a potential source of additional income for the farmers of J&K. The contribution of dairy sector to the national income is significant. This sector provides insurance against crop failures and helps in increasing the crop production by providing the drag power, organic manure and cash income on a regular basis. Although India ranked first in milk production in the world but the productivity of milk in hilly areas of J&K is less. Maximum milk is produced in certain pockets of J&K. Lack of adoption of technological dairy technologies is one of the major reasons of low milk production in J&K. India is the largest cattle producer in the world and has large animal diversity and is first in buffalo while second in goat production in the world.13 per cent of world's cattle population and 57 per cent of world's buffalo population is found in India. Buffaloes contribution towards the milk production in J&K is lesser (0.27%) as compared to the national average (1.84%).Buffaloes breeding programmes can be taken in the Union Territory of Jammu and Kashmir. There is need of cross breed and Jersey bulls in J&K to improve the cattle breed in J&K. There is also the need of advanced breeding tools to increase the breeding bulls for expansion of artificial expansion in J&K. Livestock rearing is an integral part of rural J&K. The major occupation of the rural people of J&K is agriculture and livestock rearing. This sector is the major source of income and employment in J&K. Agriculture and allied sectors contribute about 38% to the state gross domestic product of which 11% is contributed by the livestock. Dairy sector not only generates income and employment among the farmers but also supplements the varied nutritional requirements of the people. It has been observed that livestock population of livestock in Jammu and Kashmir (2011-12) has increased over the year 2009-10.Milk production in Jammu and Kashmir is steadily increasing. One of the major bottlenecks in low production in dairy sector is Jammu and Kashmir's diversified climate e.g. temperate climate in Kashmir region and humid sub-tropical climate in Jammu region. Small size of land holding is another hurdle for limited milk production in J&K as there is not much fodder production round the year because of lack of modern tech-

nologies in small farms. Department of Animal Husbandry of J&K, SKUAST-J and SKUAST-K are providing the technical know-how on dairy farmers to the farmers and also providing the frozen semen of pedigree bulls to the veterinary dispensaries.Kalari making is promoted among the Self Help Groups(SHGs) members to enhance their income. After preparation it is transported in

cular shape is given to it. Then this product is dried after draining the excess liquid from it. The ultimate product in this process is called as Kalari. Kalari is very tasty and is having cheese like taste. The remained liquid is called as Mathar and is used to split the milk. Again the special shape is given to the product and this process is repeated for 4-5 days. Kalari has its own uniqueness and flavor It is different from cheese and it has the advantage of becoming tastier when is kept dry.Once it is dried up, it is fried on pan by adding salt and onion alongwith bread to make it ready for consumption. Bamboo baskets of plants leaves are used for the drying purpose of Kalari. Kalari from hilly areas of J&K has its own identity. There are certain specific hubs for Kalari making in the Jammu region of J&K. These areas are known for the quality Kalari. Women play a major role in Kalari making specially for the management of mulching animals. There is no milk storage facilities in the hilly areas of J&K so the women coagulate the milk to make the Kalari. Also there is poor road connectivity and lack of information in hilly areas. The middlemen purchase the Kalari from the farm women once or twice a week depending upon the availability of milk in the area. They weekly give the payment in cash. These middlemen then bring the Kalari in the urban areas and sale at a good price to the buyers. Price of Kalari increases with the movement of Kalari from one place to another. Proper marketing mechanism is needed to export it as that can help to generate more income for the farmers.e-Marketing of Kalari may also be promoted to enhance its sale. Kalari is rich in nutrition and contains proteins, vitamins and minerals. In Jammu region of J&K Kalari-Kulcha is very famous and has its own delicacy. Kalari making requires skill and many institutions train the women farmers for its making. In this regards KVKs play the crucial role in imparting the skill on Kalari making to the farm women. By Kalari making entrepreneurship can be developed in the rural areas. Generally Kalari is served hot with tomatoes, bread, cabbage and onions. It can also be used in making curry. It can be kept for about one week under room temperature and can be stored for long time under refrigeration. Quintals of Kalari is prepared and sold daily in J&K. Kalari of Udhampur and Reasi districts are famous and is liked by everyone. There is need to promote Kalari of Jammu region so that the income and employment can be generated through Kalari making in rural areas of J&K. Kalari can be a boon to the farmers of J&K and special endevours are needed to promote it. Certain organized markets are needed to sale this produce.In essence, Kalari embodies a rich culinary heritage and showcases the hilly areas people of J&K resourcefulness in preserving their traditions through ages.

The Science of Depression: How Brain **Chemistry Affects Mental Health**

BHAVNEET KOUR



Prefrontal Cortex: Responsible for decision-making and emotional regulation, this area often shows reduced activity in depressed individuals.

▶ Amygdala: This part of the brain, which processes emotions like fear and

nificant role for promotion of Kalari. GI registration of Udhampur Kalari will open some new avenues of income and employment in the rural areas of J&K.

other areas of J&K Cooperatives can play the sig

Union Territory of J&K is known for many exceptional things and Kalari is one of them. Jammu is said to be the home of the world's most unique cheeses, called as the Kalari, Kalari was traditionally made from raw full fat milk, vigorously churned in an iron pot with a wooden plunger-like tool. The molten mass of milk solids was then separated by adding sour milk or curd called mathar. Once stretched, the flattened cheese was cooled on the black iron pot itself, before being placed in a bowl to solidify. The solidified cheese was then sun dried to help it lose the rest of its moisture. Since the ambient temperature in the mountainous area of J&K remains low despite a strong sun, the Kalari dried from the outside yet remain moist inside. Widely consumed in Jammu and Kashmir as a street snack, flattened Kalaris are salted and sautéed in their own fat on a hot griddle. After sautéing, the cheese develops a crisp golden layer on its exterior but retains a soft, creamy, gooey molten from interior. Flavoured with spices and served hot, Kalari is topped with chopped vegetables and rolled into a kulcha that is served with garlic and chilli chutney. In Jammu region of J&K quintals of roasted Kalaris are sold every day. It is liked by the visiting tourists in J&K.

Govt. is stressing on the value addition in agriculture and allied sectors and value addition in milk can help to open new avenues in J&K.Most of the area of J&K is hilly and about all the households in the rural areas are having cows and buffaloes. In the past there was sufficient availability of fodder as there were many meadows. There was lack of transportation facilities and it was difficult for the rural people to carry their milk to the urban areas. As milk is having a short shelf life so the people were processing their milk in the form of butter, ghee, cheese, kalari etc. They used to store these milk products and then after collection in large quantity, they were transporting these commodities in the urban areas. With the passage of time Kalari gained the recognisation and now it has become a delicacy of Jammu region. It is a delicious item and is liked by everyone. Kalari has become a source of livelihood for the many farmers of J&K. Starter or Mathar plays a crucial role in the preparation of Kalari. It is prepared by mixing curd in lukewarm milk and then milk splits due to the curd reaction. Solid part is taken out and a proper cir-

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brain chemistry in depression is central to understanding its biological basis. This article delves into the intricate relationship between brain chemicals and mental health, shedding light on how imbalances can lead to depressive symptoms.

The Role of Neurotransmitters

Neurotransmitters are chemical messengers in the brain that facilitate communication between nerve cells. Three neurotransmitters-serotonin, key dopamine, and norepinephrine-play a crucial role in mood regulation:

1.Serotonin: Often referred to as the "feel-good" neurotransmitter, serotonin helps regulate mood, sleep, and appetite. Low levels of serotonin are commonly associated with feelings of sadness, irritability, and fatigue, hallmark symptoms of depression.

2.Dopamine: Known as the "reward" neurotransmitter, dopamine is linked to motivation, pleasure, and reinforcement of behavior. A deficiency in dopamine can lead to a lack of interest in activities, reduced motivation, and feelings of hopelessness.

3.Norepinephrine: This neurotransmitter is vital for alertness and energy. Insufficient levels can cause lethargy, concentration difficulties, and a diminished ability to cope with stress.

Hormonal Influence on Depression

Hormones also play a significant role in influencing brain chemistry. Stress hormones, such as cortisol, can disrupt the balance of neurotransmitters. Chronic stress leads to prolonged elevation of cortisol levels, which may damage brain areas like the hippocampus, a region critical for memory and emotion regulation. This damage contributes to the onset and persistence of depressive symptoms.

Brain Structures and Depression

Research has identified changes in specific brain structures in individuals with depression:

sadness, becomes hyperactive in depression, leading to heightened emotional responses.

▶ **Hippocampus:** Studies have shown that the hippocampus tends to shrink in people with chronic depression, further affecting mood regulation and memory.

Treatment Targeting Brain Chemistry

The understanding of brain chemistry has paved the way for various treatments for depression:

1. Antidepressant Medications:

▶ Selective Serotonin Reuptake Inhibitors (SSRIs) like fluoxetine increase serotonin levels in the brain, helping to stabilize mood.

▶ Dopamine and norepinephrine reuptake inhibitors (DNRIs) address deficiencies in these neurotransmitters to boost energy and motivation.

2. Psychotherapy: Techniques such as Cognitive Behavioral Therapy (CBT) work to reframe negative thought patterns, indirectly influencing brain chemistry.

3.Lifestyle Interventions: Regular exercise, adequate sleep, and a balanced diet have been shown to enhance neurotransmitter function and reduce depressive symptoms.

Future Directions in Research

As science progresses, researchers are exploring advanced treatments such as deep brain stimulation (DBS) and personalized medicine, which tailor interventions based on an individual's unique brain chemistry and genetic profile. These innovations hold promise for more effective and targeted therapies.

Conclusion

The science of depression underscores that this condition is not merely a state of mind but a biological disorder rooted in the intricate workings of the brain. By advancing our understanding of brain chemistry, we can develop more effective treatments and reduce the stigma surrounding mental health disorders, ensuring that individuals receive the care and support they deserve.

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