



# KNOW BEL

ENLIGHTENING THE NOBLES!

WORLD  
MENTAL HEALTH  
DAY  
10th Oct.



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*Enlightening the nobles !*

# WELCOME !

KNOWBEL is back with a pool of mind-boggling articles filled with rare facts and famous personalities from all over the world brought to you in yet another edition!

Through the journey of reading, don't forget to pause and feel the whiff of brainstorming quizzes and contests that'll create an adrenaline chill within you! Fabulous prizes await the winners with the chance of being featured in our next issue!

We also provide you the golden opportunity to showcase your quirky talents. Spread the message among friends and family members. Just as ripples spread out when a single pebble is dropped into water, your actions can illuminate the darkroom of knowledge!

Flip the page to discover more!  
Magical things happen when you read!  
So, keep calm and read on...  
Thank You!

## SPECIAL THANKS TO

**DR. APARNA DESHPANDE**  
Faculty Advisor

## CONTACT US

Email:- [knowbel.science@gmail.com](mailto:knowbel.science@gmail.com)

Website:- [knowbel.wordpress.com](http://knowbel.wordpress.com)

## PEOPLE WHO MADE THIS VISION A REALITY

**AVADHOOT JADHAV**  
Editor-In-Chief

**PRADEEP TRIMBAKE**  
Design editor

**RITESH CHAWARE**  
Technical Head

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Atharva Valanju, Anish Mulchandani,  
Anuradha Meena, Asmi Gaikwad, Darshini  
Poola, Grishma Mehta, Gayatri, Jhanvee  
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# WONDERELLA

Never Stop Questioning

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# CREATING A METAL WITH LASER LIGHT

by Anuradha Meena



Via Wikimedia Commons

Semiconductors are essential in all electronic devices. They connect many different materials that make up the devices. For a very long time, scientists have been trying to optimise transistors by modifying their material properties. Hence enhanced properties of transistors make them more flexible to use. All the devices, from smartphones to computer processors, all heavily contain transistors.

Several semiconductors combine to form one standard transistor to control an electrical current. It would be fantastic if just one material could perform all the functions. Through doping, we can change the conductivity of semiconductors by adding atoms of other semiconductors and replacing their atoms. What we need is a material that can switch between different properties. When a laser beam hits the semiconductor zinc oxide, it illuminates. The semiconductor surface turned into metal then back again to the semiconductor.

Researchers have found that light can convert a semiconductor to metal and back to a semiconductor. This technique is easier and faster than previously thought. This technique not only increases processing speed but also simplifies the design of technological devices.

Photo-doping is a unique phenomenon in which light modifies electronic properties. Firstly, electrons suddenly move freely and an electrical current flows, as it would in metal. When the light is switched back off, the material also quickly goes back to being a semiconductor. This “photo-doping” happens due to photoexcitation: the light modifies the electronic properties so that electrons can move freely and an electrical current can flow, as it would in metal.

The three most exciting things in this process are: first is, photo- and chemical doping have fundamentally different mechanisms, but despite this, they behave very much similar; second is, very low laser power can do tremendous changes; and the third is that switching off and on of the metal happens so quickly in femtoseconds. Hence, light acts as an ultrafast switch with the ‘force’ to alter the semiconducting properties of zinc oxide to a metallic behaviour reversibly.

This incredible amazing phenomenon is very important and highly beneficial for high-frequency devices. Because of this, now gadgets can become faster and smarter. Low-power, ultrafast switching of electronic conduction properties will provide high speed and design flexibility.

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# SPACE TRAVEL- A NEW REALITY

by Jhanvee Khanna



Source: <https://pxhere.com/en/photo/1252980>

Back in the 1960s man made his first attempt to touch the stars. Since then, there's been no turning back. Almost six decades after the first manned mission to space, history was made when the first all-civilian space flight launched at the NASA Kennedy Space Center in Florida on 17 September 2021.

The goal of this flight was to raise finances and exposure for St. Jude Children's Research Hospital while also providing inspiration to individuals all around the world.

This journey, which was operated by SpaceX and funded by Jared Isaacman and Shift4Payments, demonstrates how access to space is increasing by leaps and bounds.

The Crew Dragon spacecraft took off from the launch pad atop a SpaceX Falcon 9 at 08:02 PM local time (0002 UTC) to begin the mission. The rocket took off smoothly and soared into the night sky, rapidly gaining altitude as it approached orbit.

The team is aiming for a 575 km orbit, which would be the farthest any human has travelled since Hubble, with a mission duration of three days.

The expedition's crew included Jared Isaacson, the operation's benefactor, CEO of Shift4Payments, and mission commander. Dr Sian Proctor, a geoscience professor, scientific communicator, and analogue astronaut who piloted the spacecraft, accompanied him.

The mission's medic was Hayley Arceneaux, a physician assistant (PA) at St. Jude Children's Research Hospital, and the mission specialist was Chris Sembroski, an aeronautical engineer and retired USAF officer.

They reflect, respectively, the mission ideals of Leadership, Prosperity, Hope, and Generosity.

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# GRAPHENE: A NOVEL PROTECTION COATING FOR PAINTINGS!

by Aditya Bhattacharyya

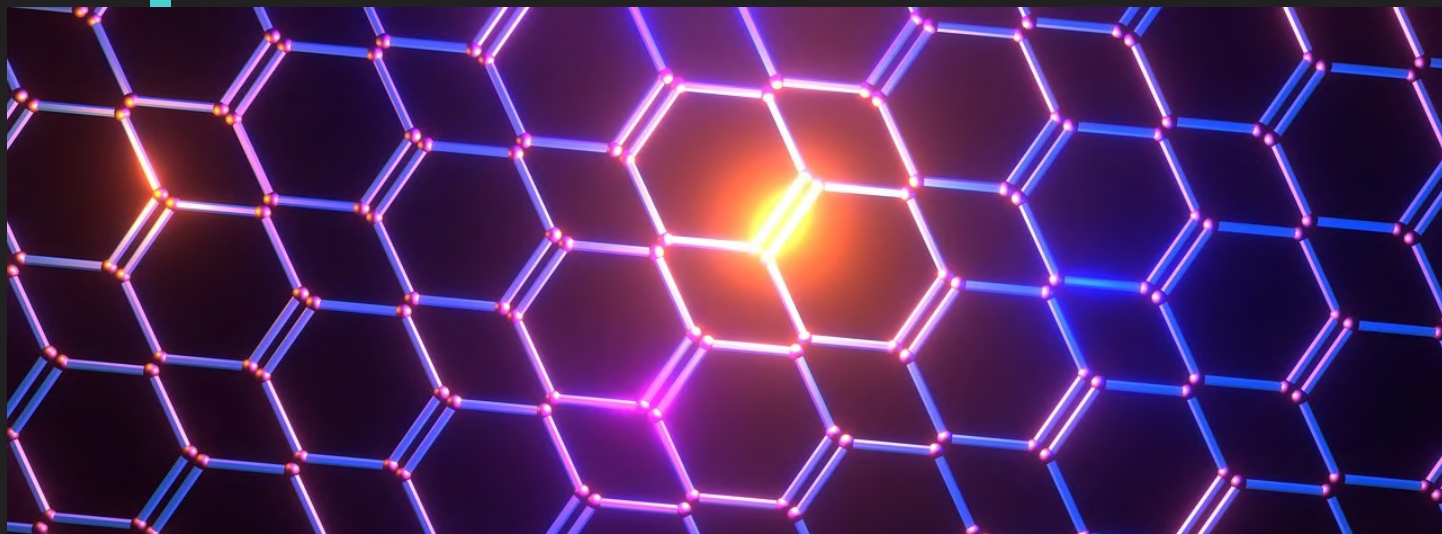


Image by CoolVid-Shows from Pixabay

Art is known to speak what words are unable to explain. Some pieces of art do it better than others. However, even among the most exquisite paintings, a select few are timeless masterpieces: pieces that must be preserved for posterity. Unfortunately, no matter how timeless their artistic genius is, the constituent color strokes are prone to degradation and fading over time. Till the early 20th century, most yellow paints were composed of photosensitive lead pigments. Years of exposure to UV light, moisture, and pollutants cause the yellow color to turn greenish-brown. This is most apparent in Vincent van Gogh's masterpiece *Sunflowers*, where the bright yellow flowers have literally wilted over time.

Some museums try to slow down this decay by keeping the paintings inside dark storage vaults and displaying them only for short periods under low-energy lights. Other art galleries employ a layer of specialized varnish to protect these paintings. However, paintings in private residences don't enjoy that privilege and thus are most susceptible to fading.

A team of researchers at the Foundation for Research and Technology Hellas in Greece have found a graphene veil that can prevent up to 70% of the color fading. Graphene is an allotrope of carbon that is essentially a sheet composed of fused rings, each containing six carbon atoms. When stacked on top of each other, multiple graphene sheets give the well-known carbon allotrope graphite. Now, graphite and graphene are some of the most researched materials of all time. Graphene is well known for its considerable ability to absorb UV light and is also an effective barrier against oxygen and moisture diffusion, thus making it a potential protection coating agent.

The researchers could grow a thin graphene film that is only a few sheets thick and apply it safely to the painting. Due to the extreme thinness of the film, it was practically invisible, leading to no loss in the visibility of the painting. When kept in an aging chamber (essentially a room with abnormally high levels of UV light, warmth, and humidity that induces color fading) for more than 1000 hours, an uncoated painting made up of Indian inks showed a large extent of fading. On the other hand, the coated version of the painting fared much better in the aging room showing only 30% degradation compared to the uncoated version, thereby showing the strong ability of graphene as a protective barrier to paintings.

Art conservation scientists are interested in these new findings but also skeptical of the method's practicality, considering the relative difficulty of growing a fragile graphene coating (which, if not done right, can permanently spoil centuries-old masterpieces). Future studies also need to look into potential reactions between graphene and the different color pigments and also test the graphene coat's effectiveness compared to pre-existing varnishes. Despite the current challenges, it is fascinating to see a well-known material like graphene still finding new and diverse applications, and one may hope that they can preserve the work of some of humanity's greatest geniuses.

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# GROWING PLANTS IN SPACE

by Anuradha Meena



Radish plants are pictured growing inside the Columbus laboratory module's Plant Habitat-02. NASA Astronaut Kate Rubins harvested leaves from the plants for the space botany experiment that is exploring the capability for food production in micro-gravity.

Source: NASA Johnson on flickr

As humans, we always aspire to explore space in all aspects. Our pioneering astronauts have explored space to a minimal extent. Space is too mysterious to know. Have you ever wondered about plants in space? Let us take a little piece of Earth on our journey to space.

Indeed, fresh flowers and gardens on the Space Station create a beautiful atmosphere. They are perfect for keeping astronauts healthy on long-duration missions. Adding fresh food to the astronauts' diet will enhance their happiness and well-being in the orbiting laboratory. Vitamin deficiencies can cause several other health problems. Astronauts need fresh vitamins to stay healthy as they explore deep space. NASA is researching a way to provide fresh nutrients from freshly grown fresh fruits and vegetables. Wouldn't it be amazing if we were successfully able to grow plants on the space stations? Indeed it will be...

The challenge for us is - how to grow plants in a closed environment that is sunlight deficient? And no Earth's gravity? NASA's scientists study plant growth in microgravity through Veggie (Vegetable production system, known as Veggie).

The Veggie gardens are of the size of a carry-on piece that typically holds six plants. Each plant grows in a pillow filled with clay and fertilisers. The pillows are essential for the uniform distribution of water, nutrients, and air in a healthy ratio around the root. In the absence of gravity, plants use light to direct their growth. In Space, the scientist uses Light-emitting diodes (LEDs) on the above plants to give them a spectrum of light suited best for their development. Plants will reflect green light and use more red and blue wavelengths. As a result, the Veggie chamber glows magenta pink!

With the help of Veggie, scientists have successfully grown a variety of plants, including three types of lettuce, Chinese cabbage, mizuna mustard, red Russian kale and zinnia flowers. Researchers at Space Center envisions planting more plants in the future, such as tomatoes and peppers. Foods like berries, certain beans and other antioxidant-rich foods have some additional benefit of protecting the crew from harmful space radiation. The one concern in it is that harmful microbes can grow in the plant product. So far, no toxic contamination has been detected, and the food has been safe (and enjoyable) for the crew to eat.

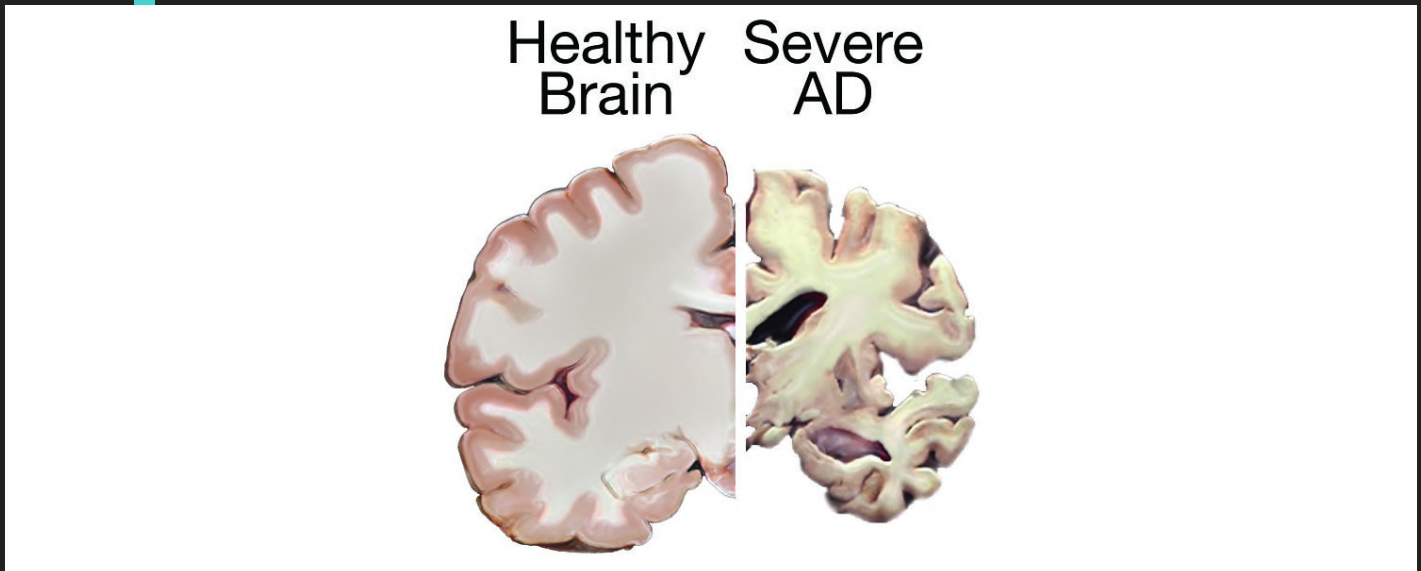
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# A POSSIBLE NEW WAY TO REVERSE BRAIN AGING

by Anish Mulchandani



*National Institute on Aging, National Institutes of Health on flickr*

Everyone has seen that as we get older, our brain functions slow down, and the risk of brain diseases increases. What if it didn't happen? Is that possible? Not entirely, but a recent landmark study has made some progress in that direction.

It is widely known that the microorganisms in our gut (the gut microbiome) play a very consequential role in the functioning of our brain, from influencing our daily mood to our overall health. Scientists set out to explore how the gut microbiome affects aging. To do this, they performed fecal transplants from young mice to older ones. Yes, they took fecal samples (poo) from 3-4 month old mice, which are equivalent to young adults, and transplanted them into 20-month-old mice, very old individuals by mouse standards. The mice were fed a slurry of feces twice a week for 8 weeks. This was done so that the microorganisms from the feces of young mice establish a presence in the gut of the older ones.

They observed that the hippocampus (which is a region of the brain involved in learning and memory) of the older mice, among other things, became more similar to the younger mice after receiving young mouse poop. They also learned to solve mazes faster.

"It's almost like ... we could press the rewind button on the aging process," John Cryan, the lead scientist, told Science Mag.

However, they also noticed that there were some things that did not change after this procedure, such as social interactions of the mice, which Cryan found surprising, because other studies had hinted at it.

There were a few criticisms of this study. For example, it didn't do enough to show that the new microbes placed in the older mice actually stayed there permanently.

Sean Gibbons, a gut microbiome researcher at the Institute of Systems Biology, told Science Mag that the field of fecal transplants still remains a mixed bag, since some studies find them to be beneficial but at least one has found that it may lead to cognitive decline.

Now, this procedure was done in rodents, not humans, and hence fecal transplants are not recommended. But as science progresses, will we have a simple, but awkward procedure, to help the aging brain? It remains to be seen.

"The good thing about your microbiome—as opposed to your genome—is that you can change it." Cryan notes.

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# WHAT ARE LUCID DREAMS?

by Jhanvee Khanna



*Pekka Nikrus on flickr*

When a person is sleeping but conscious that they are having a dream, it is called a lucid dream. In this stage, a person can control the narrative of their dream to some extent, basically guiding and directing the dream's trajectory. Because this type of sleep is linked to awareness and the reflection of that awareness, metacognition is frequently related to it.

Metacognition is the process of becoming conscious of and understanding one's own thought processes. According to research, lucid dreaming and metacognitive skills use the same cerebral circuits. This indicates that those who have more control over their own thoughts are more likely to have lucid dreams.

Despite the fact that lucid dreaming was originally noticed and recorded years ago, it was not until the 19th century that scientists began to investigate it more thoroughly. Researchers did not use objective scientific methods to analyse what happens during a lucid dream until the previous several decades. During non-lucid dreams, people are frequently unaware that they are dreaming. Even when truly odd incidents occur during dreams, they appear to be real. Only until individuals wake up do they understand it was all a nightmare.

When having a lucid dream, however, you are aware that what you are experiencing is not real and that you are in a dream. This frequently permits the dreamer to exert some control over the situation.

Lucid dreaming appeals to people who desire to explore their inner dream world with more awareness because it is such a vivid experience. People are mesmerised by the idea of lucid dreaming because, according to some, it is "the ultimate type of immersive experience." Could lucid dreaming have any practical implications aside from the novelty of the experience? While further research is a need in this area, it may have some applications. The following are some of the potential advantages.

Enhanced Creativity

Fewer Nightmares

Less Anxiety

# INSPIRON

DR A.P.J. ABDUL KALAM







*From Wikimedia Commons*

*Dr A.P.J. Abdul Kalam was an Indian aerospace engineer, scientist, and author who served as the 11th President of independent India. Also known as the Missile Man of India, he played an active role in developing ballistic defence missiles and led the Pokhran nuclear tests. On the occasion of his 90th birth anniversary this October, let us read about his inspiring journey.*

Avul Pakir Jainulabdeen Abdul Kalam was born on 15th October 1931, in the town of Rameswaram, a Hindu pilgrimage centre, on the Pamban Island now in the state of Tamil Nadu. His father, Jainulabdeen, was a boat owner and the head of a local mosque, while his mother, Ashiamma, was a housewife. Kalam's ancestors belonged to a community of wealthy traders who rented boats and ferried pilgrims to and from the island. However, long before he was born, his ancestors lost most of their fortune except their ancestral home due to business decline. As a result, Kalam, the youngest of five siblings, was raised in a poverty-stricken household.

Due to his modest condition, he started helping his family monetarily by selling newspapers. Kalam seemed to be fascinated by the concept of 'flight'. His hobby consisted of watching birds fly on the seashore for hours. His first introduction to aeronautics was when he read a newspaper article on British fighter planes and was captivated by it. At school, Kalam was regarded as a studious and hardworking student with a keen desire to learn, his favourites being Maths and Science.

At a tender age, Kalam was exposed to the values of interfaith cooperation and tolerance towards other religions. His father and Pakshi Lakshmana Sastry, the head priest of the Ramnathswamy Hindu temple, had long discussions in the evenings on issues concerning the island. Kalam was even best friends with Sastry's son! The belief was often reflected in his syncretism, which involved adopting the views of different cultures and traditions. In addition to being a practising Muslim and a believer of the Quran, Kalam also believed in Hindu traditions. He was a vegetarian, learnt Sanskrit and had also read the Bhagavad Geeta. He lived by his belief that 'respect for other faiths' was one of the cornerstones of Islam.



*From Wikimedia Commons*

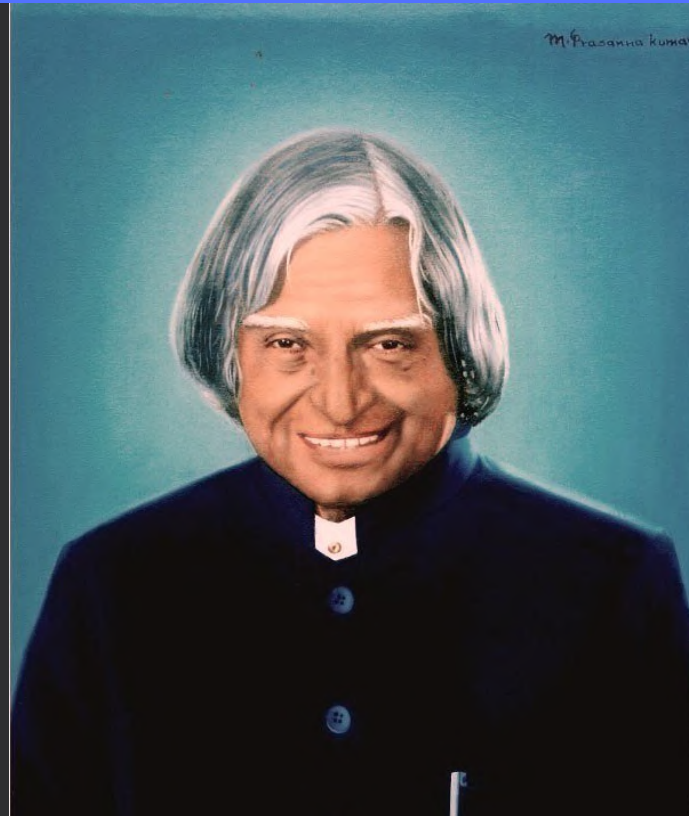
Since he lived in a small town with no opportunities for higher education, Kalam had to move out of his village. After completing his secondary education at a school in the Ramanathapuram district, he attended Saint Joseph's College in Tiruchirapalli to study Physics. After completing his degree, Kalam felt his true calling to be in the field of aviation. With the help of a much-needed scholarship, he got admitted to the Madras Institute of Technology to study Aerospace Engineering. Post his graduation in 1960, Kalam aspired to become a fighter pilot and applied to the Indian Air Force (IAF). The selection procedure went well, but to his dismay, Kalam was selected as the 9th candidate when there were only eight vacancies!

Following this, Kalam decided to join the Aeronautical Development Establishment (ADE), a subsidiary of the Defence Research and Development Organisation (DRDO). Soon after this, Kalam got an opportunity to work under Dr Vikram Sarabhai, the father of the Indian Space Programme, as a part of the Indian National Committee for Space Research (INCOSPAR). As a part of INCOSPAR, Kalam visited NASA's Langley Research Center and Goddard Space Flight Center in the USA in 1963-64. Based on this experience, Kalam was assigned to work on an expendable rocket project at DRDO in 1965.

In 1969 came the big break for Kalam. At the request of Dr Vikram Sarabhai, Kalam was appointed as a project director at the INCOSAPR, which was then renamed the Indian Space Research Organisation (ISRO). As a project director, Kalam built an indigenous Satellite Launch Vehicle (SLV-III) to deploy a satellite in a near-earth orbit. The project was also recognised by the government and was provided with the necessary funding and workforce. After about a decade of tireless working and troubleshooting, the SLV-III successfully deployed the satellite *Rohini* in a near-earth orbit in July 1980. This endeavour had its share of failures too. The first attempt at launching the SLV in August 1979 was one of those.

Although he wasn't involved in its development, Kalam also witnessed India's first nuclear test, the 'Smiling Buddha', in 1974.





*From Wikimedia Commons*

In 1982, Kalam decided to move back to DRDO, where he was appointed the chief executive of the Integrated Guided Missile Development Programme (IGMDP). Under IGMDP, Kalam and his group developed a host of ballistic missiles of varying ranges. The venture led to the creation of weapons named Prithvi, Trishul, Akash, and Nag. The programme met with resistance from international organisations which tried to restrict access to the technology required for the programme. Despite such opposition, the IGMDP succeeded in transforming India's defence capabilities and making it self-reliant in missile technology. The massive success led Kalam to be nicknamed the 'Missile Man of India'.

The government recognised Kalam's contribution in developing missile technology, and he was designated to be the Scientific Advisor to the Prime Minister, a post that he held from 1992 till 1997. Simultaneously, he also served as the Secretary of DRDO. Another significant development at the end of the 20th century was the Pokhran - II nuclear tests run in Pokhran village in the Thar desert of Rajasthan. Along with Dr R. Chidambaram, Kalam served as the Chief Project Coordinator for the tests conducted in May 1998. The government led by Atal Bihari Vajpayee soon declared India as a full-fledged nuclear state. Albeit the international community condemned the project, it did garner much attention and praise from the domestic media. The news coverage of Kalam following the incident made him the country's most famous nuclear scientist.

Owing to his essential contribution to national security, the government appointed Kalam as the 1st Principal Scientific Advisor to the Government of India, with a rank that of a cabinet minister. He held the position till he was elected the President. In 2002, the National Democratic Alliance (NDA) nominated and expressed their support for Kalam as a Presidential candidate. The opposition parties also supported the motion. As predicted, A.P.J. Abdul Kalam was elected as the 11th President of the Republic of India following an easy win. He was sworn in on 25th July 2002, thus becoming the first scientist to occupy the Rashtrapati Bhawan. During his tenure, he was affectionately known as the 'People's President'. After completing his term in July 2007, Kalam returned to his scientific career despite his chances of a second term and support from major political parties.





*From Wikimedia Commons*

He became a professor of Aerospace Engineering at Anna University, Chennai and became a visiting professor at several other academic institutions. For an exemplary career that spanned almost five decades, Kalam worked on projects in diverse fields. In 1998, along with a cardiologist Soma Raju, Kalam designed a low-cost coronary stent to treat heart disease. The duo named it the 'Kalam-Raju stent'. In 2012, they created a computer tablet, intending to revolutionise rural healthcare, called the 'Kalam-Raju tablet'. Kalam passed away on 27th July 2015 while delivering a lecture at the Indian Institute of Management Shillong owing to a cardiac arrest.

The exceptional journey of Kalam, from a poor rural household to the President of the state, is applaudable and has been honoured in several different ways. He is a recipient of all three of India's highest civilian awards, the Padma Bhushan in 1981, the Padma Vibhushan in 1990 and the Bharat Ratna in 1997. Besides that, Kalam is the 3rd person elected as the President after having received the Bharat Ratna. The first two are Dr Sarvapalli Radhakrishnan and Dr Zakir Hussain. He also received seven honorary doctorates from over 40 universities across the globe. Even after his death, Kalam received several honours and tributes. 'Youth Renaissance Day' is observed every year on Kalam's birthday in Tamil Nadu. His birth anniversary is also celebrated as 'World Students Day' due to his love for students. You may be surprised to know that a species of bacteria and a species of plant are also named after Kalam!

During the later stages of his career, Kalam also took to writing. His works were aimed at inspiring and motivating young students to help them realise their dreams. One of his books, 'India 2020 - A Vision for the New Millennium', provides a roadmap for the country to become a knowledge superpower and a developed nation by 2020. One of the books that the author of this article recommends is 'Wings of Fire', an autobiographical recollection of Kalam's life journey and one of the best autobiographies to be written.

On the occasion of his 90th birthday, we at Knowbel pay tribute to Dr Kalam and sincerely hope that his work and legacy inspire the nation's future generations and help realise his dream of a developed India.



# ASK THE EXPERTS

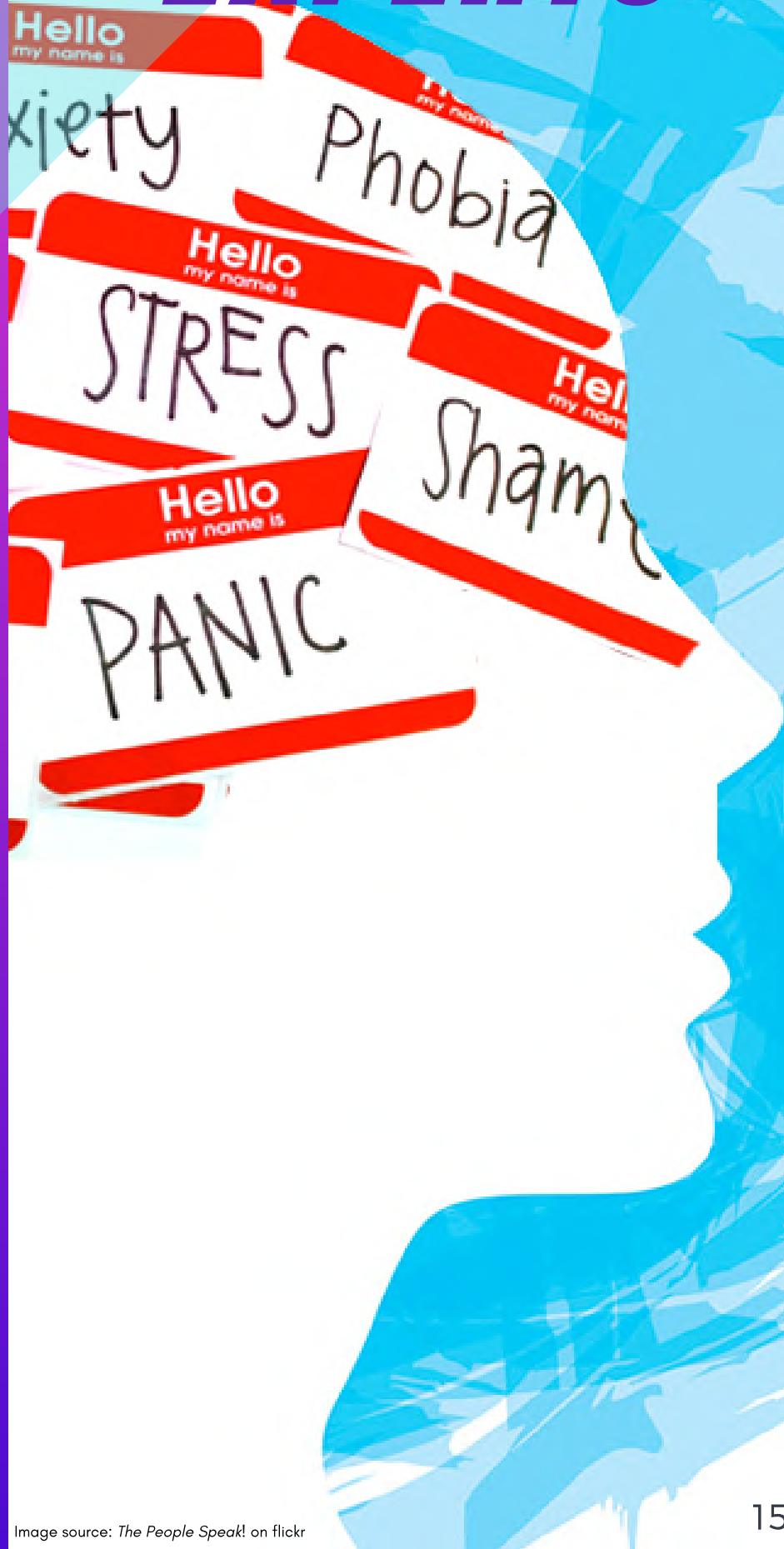
An interview with  
Ms.Vrinda Walimbe

Interviewers: Asmi Gaiwad and  
Atharva Valanju

## World Mental Health day

World Mental Health Day was first observed on the 10th of October 1992. It was aimed at global mental health education, awareness, and advocacy, against social stigma. A recent data analysis shows that as time progresses, we observe a significant increase in people suffering from various mental health issues.

On this occasion, on behalf of Team Knowbel, we are delighted to interview our own IISER counsellor Ms.Vrinda Walimbe ma'am to ask her about her views about the topic. We welcome you on board !



### **How do you describe the term mental health?**

Well, we do have technical definitions of mental health available in books, but I'm going to share with you how I look at this term, mental health. So I personally feel mental health means my ability to understand my situation, what is happening around me, my ability to understand my own feelings and also the ability to handle the normal stresses of my day to day life. And along with it, some amount of resilience, some amount of adjustability and some amount of understanding empathetically what others also might be feeling. So I see mental health in these lines, but of course, there are a few physical health aspects, social health aspects, which intermingle with them.

### **Do you feel that the pandemic has caused many mental health issues to come to the forefront and has made people realize the importance of talking about mental health?**

Yeah, very true. Pandemic has done that in the first place; you know, many times it happens that we are dealing with our life, more like a routine. Our routine life is going, and we know what to expect from that. For example, if I haven't studied enough, I expect to face difficulty in giving exams. So that expectation or ability to predict our future was suddenly taken away from people during this pandemic. And there was, you know, a terrible amount of uncertainty we all were dealing with, something utterly unknown to us. At the same time, I'm happy that it also taught people to look at mental health as an essential aspect of their life. So along with the many uncertainties, there is also this positive aspect that the pandemic did teach us.

### **Nowadays, we've been reading newspapers and watching news channels that often show flashing grim headlines. So do you think it would be better if we did not start our day with such a negative outlook?**

Absolutely because you know, if you notice, I have seen people watching three, four channels. I have also seen that each channel shows different things. I mean, there is too much information explosion happening. Moreover this information is not always factually correct and researched. So there is more dramatization happening, frankly. So yes, I definitely believe that you shouldn't watch the news more than once in a whole day, because nothing is going to change in 24 hours, and preferably that time also should not be towards the end of the day, there should be some active portion of your day remaining after you watch this grim scenario.

### **Many students often face difficulties in socializing in the online setup and as a result, remain isolated. Do you have any suggestions on how they could try opening up to their peers and others about their problems?**

So I feel that as a group when you are interacting online and especially when you have never met before, you are not aware of how the other person deals with things, so in this scenario, it would be beneficial if you made a conscious decision to first create a comfort zone. It often happens that in discussions people are not responding, they are rather reacting and so reactions are always likely to be more emotional or extreme. Keep the atmosphere more pleasant, so as to not expect any extreme reactions from others. When we first met physically we didn't directly start debating however I see that happening online. Give the other person time to develop a bond with you. Another thing is, you need to create that atmosphere where it is okay to share things with each other no matter what happens, even if you are depressed, angry or stressed. There should be no judgements passed or labels given. It should be your comfort zone where you can share whatever you feel like saying. You need not take up the role of solving other people's problems, everybody knows how to solve their own problems, just create that comfort zone.

### **During the pandemic, we observed a WFH (Work from home) environment. This has eventually led to increased working hours which has taken a toll over the mental health of adults and young children. What should be done to solve this problem?**

This problem should be solved from both ends. There should be a demarcation at home between one's personal and professional time. One should always set aside a definite amount of time for office work and for family time. These two shouldn't be overlapped. This type of space should be created at home itself to give a feel of working offline. But, ideally it isn't completely possible! Many students have expressed their views saying that their parents continuously monitor their screen time, phone activity though they might be studying or attending online classes and that's why they feel the need for a personal space which they might probably get outside the home environment. Since, online working may continue for some more time, it is necessary to adapt to these changes. This could be a possible solution.

### **As a continuation to your previous answer, do you feel that students are in any way hesitant to contact counselors or psychotherapists, because they fear the tag of 'mental health problem', being associated with them? How to overcome this?**

Unfortunately it is true. Many students are still reluctant to go to a counsellor. There is a taboo that one should go to the counsellor only if one is in trouble. That makes them wait for a long time. During the pandemic, we've observed that it has reduced considerably and people have started approaching the counsellors. It might be due to the online structure of working. It is necessary to create awareness about the counselling and change the wrong beliefs in society. One should never feel undermined if you feel the need to express your feelings to counsellors. It will surely help one to handle one's dilemma in a better way.



**Many schools and campuses are now, and students may have to soon leave the comfort of their home and return to how life previously went on. Do you feel that this would create a significant impact on mental health due to this sudden change?**

Yes, this is indeed possible as many people have got accustomed to the online way of working. But the converse would also have been true. Anxiety and uncertainty will always be there with us. Being a human it is difficult to come out of our comfort zone. But resilience is also equally beneficial. Since, impact on mental health because of this varies from person to person, it depends on one's ability to adapt to changes. I don't think there will be a significant change but it will be different for everyone.

**Any tips on how students can remain motivated throughout their journey and how to deal with stressful situations like exam pressures which will always be there with them?**

Firstly I don't agree with this terminology. It's good to have a goal in front of you and make sure that you are working towards it. Asking someone else to motivate you is certainly a bad idea because then our mind will always be stressed on achieving that goal instead of enjoying the walk on the path that goes towards achieving the goal. Therefore, the goal itself should create a self motivation in you. Ups and downs will always keep on coming but it's completely fine to take a break sometimes. Sometimes the time duration will be longer but acceptance that 'I am working towards my goal' is important. Always be and think about the present. It's good to learn from the past but let not your past define your present and set a goal at the start of each day. All this will surely help reduce stress and 'pressures'.

**Recently, when the Olympics and the Paralympic games were conducted, we witnessed many medal winners. In contrast, many skillful athletes like Simon Biles and Naomi Osaka withdrew from their respective games due to various mental health issues. There might be various athletes like these- still unnoticed facing health problems. How do you address those?**

There is a lot of investment done by the government and other private agencies in international games. Moreover, the athletes are also under tremendous pressure. That's when athletes start looking towards a game as a winning perspective, at that time the whole idea of enjoying the sport goes in for a toss. The focus is laid on ranking. Sometimes, failing isn't as bad as it seems. Acceptance and working towards it is important. If any athlete wants to have a break or withdraw, there is no harm in doing so. It is completely fine to have a personal space for yourself sometimes.

**We have observed that since the pandemic struck the world, many people lost their jobs as well as their near and dear ones. The mental trauma was certainly humongous leading to suicidal thoughts and other extreme steps. How do you think these people could be made to feel better?**

Yes, that has happened because many people lost their jobs. Those who could somehow sustain their salaries cut. When a family member has been ill for a long time, you are prepared for the worst. But, during this covid wave, one could hardly get some time to understand the cause. Many others also enjoyed family time, interacting and being with each other. Being in someone's company often helps you to face the situation better. You have to believe that things are going to be soon better and life will certainly open the door to many opportunities to come along. Some phases are long while some are short. But after all a phase is a phase. If you find someone around you distressed, tell them you are with them and try to create a comfort zone for them. You might not be able to help them economically but just assuring them that you are with them makes a big difference.

**Any message that you'd like to give our readers?**

I won't call it a message, because I feel I haven't reached a stage where I can deliver a message. But in the last one and a half year, I will tell you how I evolved. I started looking at things differently and started focusing on what I'm doing in the present day exploring and making full use of it. There are several moments we experience each day. Some are joyous, some are sad, some might be neutral as well! But the human tendency is to constantly ponder over only the sad moments which shouldn't be. Live each moment the way it is. If you need help, never hesitate to ask for one. The first help will be your family members- your near and dear ones, then your friends circle and counsellors. Everyone has their own problems- right from young students to faculty members- all age groups. Share your feelings and you will get a good listener. Don't be judgemental.



*~click by Vaibhav Ingale*

*“Don't be afraid to give up the good to go for the great”*

*~John D. Rockefeller*



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