

JUNK FOODS' IMPACTS

Junk food, with its high levels of sugar, salt, unhealthy fats, and artificial additives, poses significant negative impacts on children's growth and development. In a society where convenience often outweighs nutrition, it's crucial to recognize the detrimental effects these foods can have on children's health. Firstly, excessive consumption of junk food can lead to obesity in children. These foods are typically calorie-dense but nutrient-poor, meaning they provide an abundance of energy but lack essential vitamins, minerals, and other nutrients necessary for healthy growth. Obesity not only affects physical health but can also lead to psychological issues such as low self-esteem and depression. Moreover, junk food consumption is linked to various health problems such as type 2 diabetes, high blood pressure, and cardiovascular diseases. These conditions not only impact children's immediate well-being but also set them up for a lifetime of health struggles if unhealthy eating habits persist into adulthood.

Mindful Living: Supporting individuals with disabilities

DR KANIKA GUPTA

Mindfulness refers to the practice of intentionally focusing one's attention on the present moment, without judgment or distraction. It involves cultivating awareness of one's thoughts, emotions, bodily sensations, and surrounding environment. Through mindfulness practices such as meditation, deep breathing exercises, and body scans, individuals develop the ability to observe their experiences without becoming overwhelmed or reactive. Mindfulness has been shown to offer a wide range of benefits, including stress reduction, improved emotional regulation, enhanced concentration, and greater overall well-being. It can be applied in various contexts, from clinical settings to daily life, to promote mental clarity, resilience, and a deeper sense of connection with oneself and others. Mindfulness can be a powerful tool for individuals with disabilities, offering various benefits that can improve their overall well-being and quality of life. Here's how mindfulness practices can help:

Acceptance and Adaptation: Mindfulness encourages acceptance of the present moment without judgment. For individuals with disabilities, cultivating an attitude of acceptance can be transformative, helping them come to terms with their condition and adapt to the challenges it presents with greater grace and resilience.

Stress Reduction: Living with a disability can often come with added stressors, whether they are physical, emotional, or social. Mindfulness techniques, such as deep breathing exercises, meditation, and body scans, can help individuals manage stress more effectively by promoting relaxation and reducing the body's physiological response to stress.

Pain Management: Many people with disabilities experience chronic pain as a result of their condition. Mindfulness-based pain management techniques, such as mindful breathing and body awareness, can help individuals develop a different relationship with their pain, reducing its intensity and improving their ability to cope with it.

Emotional Regulation: Mindfulness practices can enhance emotional regulation skills, helping individuals with disabilities cope with difficult emotions such as frustration, anger, or sadness. By cultivating non-judgmental awareness of their thoughts and feelings, individuals can learn to respond to challenging situations more skillfully and with greater resilience.

Increased Self-awareness: Mindfulness encourages individuals to become more attuned to their bodies, thoughts, and emotions. For people with disabilities, this heightened self-awareness can facilitate a deeper understanding of their limitations, strengths, and needs, empowering them to make informed choices about their health and well-being.

Improved Concentration and Cognitive Functioning: Mindfulness practices have been shown to enhance attention, concentration, and cognitive functioning. For individuals with disabilities that affect cognitive abilities, such as attention deficit hyperactivity disorder (ADHD) or traumatic brain injury (TBI), mindfulness techniques can be particularly beneficial in improving focus and cognitive control.

Enhanced Social Connections: Disabilities can sometimes lead to feelings of isolation or alienation. Mindfulness-based interventions, when practiced in group settings, can foster a sense of connection and belonging among individuals with disabilities by providing opportunities for shared experiences and mutual support. Overall, mindfulness can serve as a valuable complement to traditional medical and rehabilitative interventions for people with disabilities, offering a holistic approach to promoting health, well-being, and resilience in the face of adversity.

(The author is a Ph.D. in Human Development from University of Jammu).

Smiles boost your physical and mental wellness

SURJIT SINGH FLORA

Smile is believed to have great power and Scientific research has demonstrated the numerous benefits of smiling, including its ability to improve mood, reduce stress, strengthen the immune system, and potentially increase longevity. There is a Chinese saying: Use your smile to change the world; don't let the world change your smile. In fact, our face is the mirror of our heart because what is in the heart cannot remain without being reflected on its face. However, true laughter is laughter in solitude. When fate gives us a hundred reasons to cry, show her that we also have a thousand reasons to smile. The simple act of smiling is a powerful gesture that has the potential to significantly improve our well-being via its ability to make us feel better. The simple act of smiling has a multitude of beneficial consequences on one's health, in addition to the social and emotional advantages that it provides. An examination of the ways in which smiling may be beneficial to not just our physical health but also our mental well-being is going to be the focus of this paper. It seems as if the light that shines through the window of our heart is exposing that there is a person who is kind and approachable on the inside. This is what we mean when we smile. The simple act of putting a smile on one's face has the ability to promptly erase any and all problems that one could be experiencing. In some circumstances, a smile may also function as a mask to cover a wide range of feelings, such as discomfort, anger, irritation, and even concern. At times, our sorrow seems to materialize on our faces in the form of a grin, and this smile has the potential to become the source of happiness for another individual. Attempting to interpret their grins is not always an easy task. When you smile, you need to make sure that your eyes are moving around. It is a widely held concept that when we smile with real passion, our eyes also smile. On the other hand, when we smile in a phony way, our eyes do not support us. Endorphins, dopamine, and serotonin are together referred to as the "feel-good" neurotransmitters. When we smile, our brains stimulate the production of these four chemicals. This is something that is good for our health. The presence of these molecules contributes to the manifestation of a feeling of relaxation and helps to reduce the levels of tension that an individual feels. It is possible that smiling might lower the levels of the stress hormone cortisol in the body. This is one of the ways that smiling can help relieve stress. Serotonin is a neurotransmitter that plays a part in the creation of feelings of pleasure and general well-being. Smiling produces serotonin, which is a neurotransmitter. It is conceivable for the simple act of smiling to establish a positive feedback loop, which in turn may boost our mood and our whole view on life. This is something that can happen. When you smile, you stimulate the creation of endorphins and other neurotransmitters that are associated with positivity. These neurotransmitters

may assist in the strengthening of your immune system. According to the findings of a number of studies, smiling has the potential to promote the production of antibodies and immunological cells, which would result in a more strong defense system resistant to a wide variety of illnesses. When it comes to the levels of blood pressure, researchers have shown that smiling has a favorable influence. Our blood vessels expand when we smile, which leads to an increase in blood flow and a drop in blood pressure. When we smile, our blood vessels expand. As a consequence of this, there is the possibility of significantly improved cardiovascular health as well as a decreased likelihood of getting heart disease. Laughter triggers the release of endorphins, which are neurotransmitters that have the ability to act as natural painkillers. They have the ability to diminish the sense of pain and increase the individual's tolerance to the particular experience that they are experiencing. It is possible that smiling might be a highly helpful method for those who are experiencing pain that is mild to moderate in intensity. There is a possibility that we might improve the functioning of our respiratory system by smiling and participating in deep breathing, which is a component of smiling. It is possible for us to optimize the capacity of our lungs, enhance oxygen exchange, and promote general improvements in respiratory health if we increase the quantity of oxygen that we take in. There is a strong correlation between laughter and the relaxation of facial muscles, particularly those muscles that are associated with tension and stress. There is a possibility that this relaxation response may extend throughout the rest of the body, so reducing the tension that is present in the muscles and creating a feeling of serenity. Without a doubt, smiling is the most commonly acknowledged method of conveying friendliness and approachability. We make ourselves more desirable to other people and improve the possibility that we will build good interactions with other people when we smile. By smiling, we make ourselves more appealing to other people. The cultivation and maintenance of strong relationships is a key component in the process of achieving and maintaining comprehensive well-being. It is common for our levels of productivity to increase when we are in a positive frame of mind at the moment. Smiles have the potential to improve a number of skills, including concentration, creativity, and the capacity to find solutions to difficulties. As an additional benefit, it has the ability to bring about a more pleasant environment at work, which, in turn, may contribute to greater levels of job satisfaction and motivation. There is a correlation between the decrease of stress, the strengthening of the immune system, the improvement of cardiovascular health, and the increase of mental well-being, all of which are related with the prospect of living a longer and better life. According to the findings of a number of studies, those who smile more often have a higher probability of surviving for a longer period of time

than certain individuals who smile less frequently. There is a strong connection between smiling and mental health, and it has the ability to have a substantial influence on our overall well-being. A smile can really improve our mental health. It is possible that smiling might help decrease symptoms of stress-related disorders, anxiety, and depression. Smiling is one of the ways that this can happen. It also has the ability to raise one's sense of self-worth and promote feelings of social connectedness, both of which have emotional benefits. It is true that smiling is contagious, and when we smile at other people, it often prompts them to smile back at us just as much as they smiled at us. People who are in close proximity to us will experience an improvement in their mood and overall well-being as a result of this exchange of positive energy, which has the potential to cause a ripple effect. To conclude, the act of smiling involves a significant amount of additional information in addition to a simple facial expression. A number of health benefits are connected with it, including the alleviation of stress, the improvement of mood, the support of the immune system, the management of blood pressure, the increase of pain tolerance, and the enhancement of the respiratory system. These are just some of the many benefits. In addition, smiles have the power to strengthen relationships, increase productivity, and ultimately result in a longer and more joyful life. Because of this, you should not be hesitant to share your smiles with the rest of the world and take delight in the many benefits that they provide. It is the expressions that are on the faces of the people that we interact with on a daily basis that have a significant influence on us. It is possible for us to detect the smiles that emerge on their faces the instant they occur. It is regarded as the most effective approach to face them smiling, regardless of the circumstances that we are going through in our life at the time. When you feel the desire to smile, it is essential that you do it without inhibitions and without holding back. As a consequence of carrying out these actions, our health will remain in good condition. We need to make it a habit to smile in such a way that even when we are weary by the circumstances that are bothering us, life will smile and say that it was a delight to meet you. This is something that we need to instill in ourselves. One last thing to note is that smiling is not only a facial emotion; it is much more than that. It has a lot of favorable impacts on health, including the reduction of stress, the enhancement of mood, the support of the immune system, the regulation of blood pressure, the promotion of pain tolerance, and the improvement of the respiratory system. Additionally, smiles have the ability to improve relationships, contribute to an increase in productivity, and ultimately result in a life that is longer and more satisfying. It is for this reason that you should not be reluctant to share your smiles with the world and to take advantage of the many advantages that they provide.

Sam Pitroda's controversial remarks viz a viz Congress

OMKAR DATTATRAY

The overseas congress president, senior congress leader and advisor of congress Sam Pitroda has once again given controversial statements about congress. The remarks of Sam Pitroda has exposed congress further and the real face of congress has come to fore. Sam Pitroda says congress's redistribution of wealth is in the interest of people and advocates inheritance tax in India. Mr Pitroda said that the subject of wealth distribution is strictly a policy issue and he feels concerned about Prime Minister Narendra Modi after his remarks on congress manifesto. Chairman of Indian overseas congress Sam Pitroda has backed the congress stand on redistribution of wealth and advocated an inheritance tax in the country. Emphasizing the need for policy towards wealth redistribution, Pitroda elaborated on the concept of inheritance tax prevailing in the US. In America, there is an inheritance tax. If one has dollar 100 million of wealth and when he dies he can only transfer 45% to his children, and 55 is grabbed by the government. That is an interesting law. It says you in your generation made wealth and you are leaving now you must leave your wealth for the public, not all of it, half of it, which to me sounds fair said Pitroda. PM slams congress on Pitroda's inheritance tax remark, says its dangerous intention, his children get dollar 10 billion and the public gets nothing. So these are the kinds of issues people will have to debate and discuss. When we talk about redistributing wealth, we are talking about new policies and new programs that are in the interest of the people and not in the interest of the super rich only, he added. Pitroda further said "This is a we do not have a minimum wage in the country. If we come up with a minimum wage in the country saying you must pay so much money to the poor that is the distribution of wealth. Today, rich people don't pay their peons, servants, and home help's enough but they spend that money on vacation in Dubai and London. When you talk about the distribution of wealth, it is not that you sit on a chair and say I have this much money and I will be distributing it to everybody," Pitroda said. "It's naive to think like that. The PM of a country thinks like that. I have some concerns about his brain," he said when asked to comment on the prime Minister's criticism of congress manifesto.

Prime Minister Modi and the BJP have criticized the congress manifesto saying the poll document smacks of appeasement and that if it comes to power it will distribute wealth from the quota of SC, ST and OBC communities. Pitroda also expressed disappointment over Modi equating the congress manifesto for Lok Sabha elections a poll document of erstwhile Muslim League. Pitroda said that he feels ashamed of the prime minister and called him a pathological liar. Slamming the PM over his recent remark, those who have loved children, Pitroda said that fear has set in the minds of BJP after first phase of polls and this has led them towards making such comments. Pitroda's recent comments on inheritance tax triggered a political slugfest on Wednesday with PM Modi attacking congress for planning to impose higher taxes and not wanting people to pass on their hard-earned income to their heirs. Congress distanced itself from Pitroda's remarks and party spokesman Jairam Ramesh said former PM Rajiv Gandhi in fact abolished estate duty in 1985. Leading the BJP's attack over senior congress leader Sam Pitroda's comments, Prime Minister Modi alleged the opposition party plans to tax inheritance passed down from parents to their children. The congress has distanced itself from Mr Pitroda's remarks and said they did not reflect the party's position. Addressing a poll rally at Chhattisgarh's Surguja, the Prime Minister said the congress's dangerous intentions are coming out in the open. Referring to Mr Pitroda, he said, "The advisor of the prince of the congress royal family had earlier said that the middle class should be taxed more. Now they have gone further ahead. Now the congress is saying that it will impose an inheritance Tax and tax the inheritance received by the people from their parents. "The wealth you accumulate with your hard work won't pass down to your children. The congress's mantra is during your life time, loot after your death." The PM said taking a cue from Life Insurance Corporation's "Zindagi ke saath bhi, Zindagi ke baad bhi" tagline, "As long as you live, congress's high taxation will make you suffer. When you are dead, they will put the burden of inheritance tax on your children." he said. Mr Pitroda, who leads the overseas wing of the congress is at the centre of a huge row after his remarks during an interview to news agency ANI. While targeting the prime min-

ister over his allegation that the congress plans to redistribute the nation's wealth and to take away the property and jewellery if it comes to power, Pitroda said the congress's manifesto is well-drafted and accused BJP of making stories. The congress, he said, has always focused on the people at the bottom of the economic pyramid, whether they are OBC's, Muslims and substantially increased in the last ten years, he said. "This doesn't mean that you are going to take your wealth and give it to somebody. This means to create new policies so that the concentration of wealth can be prevented. It is like a Monopoly Act," he said. He then cited a US example that snowballed into a controversy. "In America, there is an inheritance tax. If one has 100 million USD worth of wealth and when he dies he can only transfer probably 45% to his children, 55% is grabbed by the government. Pitroda said this is a policy issue. Congress party would frame a policy through which the wealth distribution would be better. Soon after the remarks started doing the rounds on social media, the BJP doubled up on its charge against congress. Union Home Minister Amit Shah appealed to people to take Mr Pitroda's remarks seriously. "Their hidden plans have come out in open. People should take note. And congress must withdraw the mention of survey from its manifesto," he said. In fact the manifesto calls for a nationwide socio-economic and caste census to provide the data foundation for affirmative action, but does not mention any wealth redistribution plan. The matter gained steam after the PM alleged in election rallies that congress plans to conduct a survey and put into motion a wealth redistribution plan. He has also claimed that property and jewellery owned by the citizens would be surveyed, taken away and redistributed. Pushed into firefighting mood over Pitroda's remarks, the congress distanced itself from the senior leaders remarks and stressed that its manifesto does not mention what BJP is alleging, senior leader Jairam Ramesh posted on X, "Sam Pitroda has been a mentor, friend, philosopher and guide to many across the world, including me. This does not mean that Mr Pitroda's views are always of congress's. To cut a long story short it can be said that there should be no inheritance tax as proposed by Sam Pitroda and talked in the congress manifesto." (The author is a columnist, social and KP activist).

Semiconductor Mega Trends and Career Opportunities

DR ABHILASHA GAUR

The semiconductor industry is experiencing a profound transformation, propelled by technological advancements, market dynamics, and global initiatives. In India, this transformation is particularly significant, as the nation emerges as a key player in the semiconductor landscape. Let's delve into the mega trends shaping the semiconductor industry in 2024, the career opportunities they present, and the role of the Electronics Sector Skills Council of India (ESSCI) in preparing professionals for this dynamic field.

Semiconductor Applications Across Diverse Fields:

Semiconductor chips serve as the fundamental building blocks powering a vast array of applications, welding control over power management, enabling intricate power electronics systems, and orchestrating indispensable functions within electronic devices. From the ubiquitous smartphones and computers to the intricate network of IoT devices, semiconductor chips form the backbone, fuelling innovation and driving the seamless integration of technology into our daily lives. "Driving Automotive Innovation: Semiconductor technology has spearheaded transformative advancements in the automotive sector; ushering in a new era of intelligent and dependable vehicles. By seamlessly integrating semiconductor components, automobiles have evolved to possess heightened intelligence, unparalleled reliability, and superior performance. Advanced Driver Assistance Systems (ADAS) rely on semiconductor solutions for critical features such as collision avoidance, lane departure warning, and adaptive cruise control. "Revolutionizing Telecommunications: Semiconductor innovation is at the forefront of transforming the telecommunications landscape. With the emergence of 5G networks, semiconductor solutions are crucial for powering base stations, antennas, and network infrastructure, enabling faster data speeds, lower latency, and unparalleled connectivity. In addition to network infrastructure, semiconductor chips are integral to the development of smartphones, enabling advanced features such as AI-driven cameras, augmented reality, and facial recognition. "Empowering Healthcare Technologies: Semiconductor technology is revolutionizing healthcare by driving advancements in medical diagnostics and patient care. Medical imaging devices, including MRI and CT scanners, heavily rely on semiconductor components for signal processing and image reconstruction, enabling precise diagnostics and treatment planning. Semiconductor chips also power medical monitoring devices such as wearable fitness trackers and smart

health monitors, allowing for continuous health tracking and remote patient monitoring. "Transforming Wearables: The integration of semiconductor technology has led to remarkable advancements in wearable and smart devices, revolutionizing the way we interact with technology. Wearables, such as wireless earbuds and smart headphones, leverage semiconductor chips for Bluetooth connectivity, noise cancellation, and audio processing, delivering immersive audio experiences. Similarly, wearable devices, including smartwatches and fitness trackers, rely on semiconductor solutions for sensors, data processing, and connectivity, enabling seamless health and activity tracking.

Career Opportunities in Semiconductor Technology:

As the semiconductor industry evolves in response to these mega trends, it creates exciting career opportunities for professionals across the value chain - designing, fabrication and packaging. From semiconductor design and manufacturing to research and development, there is a growing demand for skilled professionals who can innovate and drive technological advancements in the industry. The sector is expected to see more than 800,000 to 1 million job openings over the next five years, says staffing company Randstad. The government recently approved \$15 billion worth of investments into the sector including from the Tata group. India's burgeoning semiconductor sector is facing a surge in demand for talent, fuelled by new investments and the government's ambitious plan to transform the country into a chip manufacturing hub.

Semiconductor Design Engineer: Semiconductor design engineers play a crucial role in developing the architecture and circuitry of semiconductor chips. They utilize tools like Electronic Design Automation (EDA) software and simulation tools to design and optimize chip layouts for performance, power efficiency, and manufacturability.

Process Engineer: Process engineers are responsible for developing and optimizing semiconductor manufacturing processes. They work closely with equipment vendors and manufacturing teams to ensure the smooth operation of semiconductor fabrication facilities, improve yield rates, and reduce production costs.

Research Scientist: Research scientists in the semiconductor industry focus on exploring new materials, devices, and technologies to push the boundaries of semiconductor innovation. They conduct experiments, analyse data, and collaborate with cross-functional teams to develop next-generation semiconductor solutions.

Material Engineers - Material engineers in the semiconductor industry are pivotal in researching, selecting, and optimizing the materials used in semiconductor device fabrication. Their expertise spans a wide range of materials, including silicon, gallium arsenide, and various compound semiconductors. Material engineers work closely with semiconductor design teams to ensure that the chosen materials meet the performance requirements of the intended applications while also considering factors such as cost, scalability, and reliability.

Product Marketing Manager: Product marketing managers play a vital role in bringing semiconductor products to market. They conduct market research, develop marketing strategies, and collaborate with sales teams to promote semiconductor products and drive revenue growth.

Quality Assurance Engineer: Quality assurance engineers ensure that semiconductor products meet the highest standards of quality and reliability. They develop and implement test plans, conduct performance testing, and analyse data to identify and address any issues or defects in semiconductor products.

Packaging experts: Packaging experts in the semiconductor industry are instrumental in developing and implementing packaging solutions that safeguard semiconductor chips. Their role entails meticulous selection of packaging materials, designing efficient packaging structures to ensure protection against environmental factors and mechanical stresses, and optimizing designs for thermal management and electrical performance. They collaborate closely with design and manufacturing teams to ensure that packaging solutions meet stringent industry standards while balancing factors such as cost-effectiveness and manufacturability.

Machine maintenance technicians - Machine maintenance technicians also play a crucial role in implementing preventive maintenance schedules, identifying opportunities for equipment upgrades or optimizations, and ensuring compliance with safety regulations and operational standards. Their expertise contributes to the overall efficiency and longevity of semiconductor manufacturing operations.

Safety protocol checkers - These people are integral to maintaining a safe and secure work environment within semiconductor manufacturing facilities. They are responsible for enforcing safety regulations, conducting regular inspections to identify potential hazards, and implementing corrective measures to mitigate risks and prevent accidents. Safety protocol checkers also play a vital

role in developing and implementing safety training programs, conducting safety audits, and promoting a culture of safety awareness among employees. Their diligence and vigilance help to safeguard the well-being of personnel, protect semiconductor manufacturing equipment, and maintain the integrity of semiconductor processes.

Qualifications: National Occupational Standards by ESSCI

As the field becomes more specialized, advanced degrees or skill training provide a competitive edge. Specialized qualifications like IC Package, VLSI Design, and Package Design enhance a designer's expertise. As on date ESSCI has developed 25 NSQF aligned and approved qualifications on semiconductors (Design, Packaging & Manufacturing segment) and is also planning to develop more qualifications as per the need & demand of the industry especially on the Clean Room, Machine Maintenance and other related fragments, which are the need of the hour.

Short Term Qualifications & Upskilling NOS's

ESSCI offers focused a range of qualifications covering the complete value chain of the semiconductor industry. Short Term courses such as VLSI Design Engineer; concentrating on designing SOC-module functions using software, Embedded Full Stack Engineer; IoT Hardware Analyst are some of the top courses offered for pursuing engineering graduates to gain the knowledge of EDA Tools and system design. ESSCI also provides qualifications for Wafer Back Grinding Engineer and Wafer Dicing Engineer; specialising in wafer manufacturing tasks which can be taught to ITI / Diploma students.

ESSCI also has foundation / upskilling courses in the field of Nano Science & Advance Nano Science which is also in great demand. Also, there are some basic courses on the Industrial Safety - Electrical & Hazchem which are very crucial & important for the industrial safety requirements. "The complete list of our qualifications along with their model curriculum are all uploaded on our website -https://esse-india.org/qualification-packs.php. In conclusion, the semiconductor mega trends present unprecedented opportunities for India to assert its leadership in the global semiconductor industry. Through strategic investments, policy support, and talent development initiatives, India is poised to capitalize on these trends, driving innovation, fostering entrepreneurship, and creating a thriving semiconductor ecosystem for generations to come.

(The writer is Chief Operating Officer Electronics Sector Skills Council of India).