



PsyLens
Lets scan through...

— An e-Magazine of Psychology Association —



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NOTE FROM THE EDITOR

Dear members of Psychology community:

Greetings from the Department of Psychology (Aided), PSG College of Arts & Science!!

With immense pleasure, we present before you the Volume 6 Issue 2 of PsyLens, an e-magazine managed by a team of Psychology students from PSG College of Arts & Science. The present edition holds simplified, condensed versions of research works conducted worldwide in the field of Psychology. This edition has a diverse outlook of information and has made its attempt to mark the beginning of your reading journey with a devotedly prepared wisdom corner, facts and enlightenment on "Cosmic insights of Indian culture."

We remain grateful to our institution for the learning resources that are made available to us and in facilitating our very initiative of establishing and sustaining PsyLens. We are immensely thankful for the support of the graphic design platforms like Canva and other websites for their quality, copyright-free pictures/images. We thank the readers of PsyLens who have been continuously supporting us with their zest and zeal. We are thankful to our seniors who guided us throughout the process of this edition and nurtured us to take PsyLens forward. They grew out through PsyLens and they are out to outgrow. We wish them happiness and success in all their ventures.

Wishing you a delighting reading experience!



Warm Regards,
Team PsyLens

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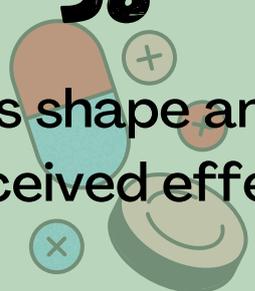
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Cosmic insights in Indian Culture

- Charumathi P

Eastern mystics always had a dynamic vision about the universal mysteries, they veiled the lore by infusing it with art and culture, and this was only unveiled by sages and Gurus through their intuitive knowledge. One such art which imbibes the cosmological mystery is 'Chidambaram Thillai Nataraja' statue of 'Lord Shiva' representing the 'Ether element', and one of the sages who revealed its wisdom was 'Thirumoolar' through the poem 'Thirumanthiram'. The verse goes; "A human represents 'Shiva-lingam', 'Shiva-lingam' represents 'Chidambaram', 'Chidambaram' represent 'Sadha-Shivam', and 'Sadha-Shivam' represents 'Lord Shiva-dance'."

Human life exists in both form (Rupam) and formless (Arupam) states like 'Shivalingam' (symbol of consciousness), which has both form and formless state. A human has a perceptible form and formless state which is the soul: the seat of cosmic-consciousness.

That's why a 'Shivalingam' represents 'Chidambaram' (conscious-space), which is the ultimate state one should attempt to attain. Thirumoolar also said that "Andathil Ullathu Pindathil" (cosmos is in us) which means the macro-cosmos and micro-cosmos have the same fundamental nature and knowing the micro-cosmos will let one know the macro-cosmos.

One of the ways to know the macro cosmos is by knowing human nature (mini-cosmos). The 'Chidambaram temple' is structured in a way to understand human nature, which metaphorically signifies that humans are micro-cosmos (extent of macro cosmos). The 9 entrances of the temple represent the 9 gateways in a human where one gets connected with the external cosmos and the 5 principle sabhas namely; chitt, kanaka, deva, nritya & raja sabha represent the 'Panchakoshas' shrouding a soul. The 'Kanaka sabha' (Ponnambalam) roof is made of 21,600 gold sheets which are

representing the 21,600 breaths taken by a human being on a day. These sheets are pinned by 72,000 golden nails which represent the visible and invisible pulses pulsating in a human. The temple encloses things like 4 pillars representing the '4 Vedas' in kanaka sabha, 28 pillars in Ponnambalam representing the 28 Agamas (tantric texts and scriptures), and these 28 pillars support 64+64 roof beams which are representing the 64 Arts, the cross beams represent the blood vessels running throughout the human body. The 9 kalasas on the gold roof represent the 9 energies present in cosmos such as sound, heat, nuclear energy, etc.,

The 6 pillars in the Artha mantapam represents the 6 Shastras and the 18 pillars in adjacent mantapam represent the 18 Puranas. The main deity in the temple is situated slightly in the left side representing the human heart which is the seat of conscious space (Chidambaram). 'Chidambaram' represents 'Sadashiyam' which indicates 'Lord Shiva' who is described as the cause and consequences of everything.

In Rig Veda, the 'Hymn of creation' (Nasadiya Suktam) says that, 'Darkness was wrapped by darkness and from this dark energy more living energies was transmuted into the present-day form which has light, heat, water and more such life-sustaining aspects'.

The 'Dark energy' which is the base for the universe and yet has been a mystery on its own basis is what referred as 'Lord Shiva' who neither has a base nor an end, the line 'Nalirulil Natam Painдру Adum Nathaney, Thilai in kuthaney' (Nataraja is dancing in darkness) in Shiva Purana says that the dance of Nataraja who's moment is similar to the moment of subatomic particles of an atom is always present in the cosmos, and that is why 'Shiva' represent the 'cosmic-dance', as dancing universe is a ceaseless flow of energy which causes an infinite variety of patterns merging into a universal interaction; from atom to cosmos.

The 'Nataraja statue' is a significant form of 'Lord Shiva', 'Nataraja' meaning 'king of dance,' scientific studies have shown the similarity between the cosmic dance of 'Nataraja' and the dance of 'subatomic particles'. Nataraja-dance is divided into two forms of dance; Ananda-Tandav, the dance of creation and Rudra-Tandav, the dance of dissolution

The 'Nataraja-dance' symbolizes the whole cosmos; creation, dissolution, preservation, salvation & illusion. The pictorial representation of Lord 'Nataraja statue' will disclose the following symbolism.

The ring of fire punctuated with flame represents the cyclic nature of cosmos with creation and transmutation being the ultimate reality, the flame also denotes the number of solar systems present in the cosmos. The deity has been sculpted with four hands in which two hands are kept in equal balance holding the drum in right and fire on the left hand.

The drum represents the rhythm of creation as everything in the cosmos is made up of sounds & reverberation, even life starts in a womb with pulsation. The flame in the left hand represents the transmutation of the existing one. This specifies that creation and dissolution in the cosmos are equally balanced by 'Lord Nataraja'. The other two hands in which the right hand showing the 'Abhaya Mudra' denotes the preservation of the cosmic cycle and there is nothing to be afraid of, as everything is just a Maya (illusion). Another left hand pointing towards the lifted left leg denotes the motion of energy in all forms and formless, as the left side of the statue represents the goddesses Sakthi (energy) also known as the wife of 'Lord Shiva'.

The right leg stamping a dwarf named Apasamara represents the subdued over ignorance instead of killing it; as the absence of ignorance will result in devaluing of knowledge attained through dedication and effort. The snake in the neck making three rounds represents his control over time and space.

Another snake is going around the deity and touching the ring around, which represents the cosmos going through the motion of creation and destruction. The crescent moon and third eye of lord 'Nataraja' shows the abundance of knowledge and wisdom he has attained, the two eyes represent the sun in right and moon in left being the main cause of all life forms. The water flowing from the top of his head denotes, water is the base of all life forms and from the smattered hair it can be understood that the dance is the most powerful one and no one has a control over it.

There is no surprise in the world's largest Particle Physics lab CERN (European Organization for Nuclear Research) in Switzerland appreciating the mystical knowledge of India for enclosing the whole cosmos in one art.

Their appreciation was extended to action by placing the 'Nataraja statue' in the entrance of the CERN lab in due respect for the art which has come closer to science than anything found so far in mankind.

THE ART OF WRITING

- Priyadarshini NS



In traditional Indian society, people were involved in performing various manual works requiring intense physical and mental efforts which helped in gaining bodily strength and fitness. Engaging oneself in playing traditional games like kho kho, Gilli-Dhanda, 7 stones, etc., also helped them develop gross and fine motor skills, spatial and sequencing skills, problem-solving abilities, creativity and many other executive functions.

In addition to these activities, another manual (tactile) activity that commonly existed and was a popular mode of inscription and communication was the art of 'Writing'. Writing was commonly performed with the help of an object,

technology or a tool on a physical substrate. People learnt to write in the sand through sticks or stones; slates through slate pencil or chalk pieces, which facilitated tactile sensory experiences helping in acquiring muscle strength.

The discovery of papyrus augmented the usage of paper and pencil (pen) for handwriting and transcription. In the present society, digital technology rules the world, which is evident by the fact that the virtual touch-screen keyboards and the laptops (computers) are more commonly

and effortlessly used by young children for academic and non-academic purposes and there is increased importance given to the utilization of ICT (Information and Communication Technologies) in schools and colleges. Technological developments have been beneficial in numerous areas, helping individuals in immediate completion of works, simultaneously making them sluggish and dull.

This gradual and immense shift from handwriting to digital writing has brought about various changes, wherein communication through handwritten letters was more elaborate and thoughtful while conversations through digital media have become shortened, spontaneous without much thought since letters were written once in a while, whereas digital conversations could be done at any moment.

Furthermore, it has led to a major change in the actual process of writing, where handwriting has been a complex task involving motor movements, eye-hand coordination, spatial ability and contemplation, the typing in virtual keypads has become simpler and easier since one uses touch screens by pressing appropriate keys for acquiring the needful content. This modification in the process of writing has brought

about changes in cognitive processing and brain area activation. The motor, tactile and visual movements during handwriting entail feedback to the brain regarding the letter shapes, which is absent in case of digital typing since there are only pressing of keys in keyboards. On studying the difference in the activated brain regions during handwriting and typing in laptops, the results of the fMRI scan indicate more pronounced activation of various brain regions concerned with imagery, observation and execution of actions during handwriting than in the case of typing (Longcamp et al., 2006).

The use of digital technologies in an academic or work setting was found to be more distracting than the method of handwriting. This was because of the easy accessibility of the internet and the numerous pop-ups flashing on the screen of a laptop (computers), which is unlikely in case of information inscription through handwriting since the focus is completely on the notepad and writing (Carrie Fried, 2007).

The handwriting was also found to be significant in the mental perception of letters, helping the children efficiently mastering the letter shapes.

In addition to this, the grapho-motor processes (lack of this processes in typewriting) and the temporospatial coincidence with the auditory and visual attention (the unity is broken in case of typewriting since it allows one to focus either on the keyboard or on the screen) involved in handwriting resulted in better storage of information in the long-term memory (Mangen A et al., 2015).

Academically, individuals taking handwritten notes were found to have better memory and learning than the ones taking it in laptops. This might be because of the difference in the note-taking styles in both cases, where the former listens to the lecture, understands it and takes summarized (paraphrased) notes which may involve deeper processing and the latter take verbatim notes which may only involve a shallow level of processing.

Moreover, the use of digital technologies could be detrimental to physical and mental health since the usage for a longer time might cause eye and neck strain, headache, mental stress and depression. These ill-effects could be prevented by reducing the use of technology and

shifting to the use of books and notepads while learning. Journaling and expressive writing were found to produce various self-reported physical, physiological and psychological benefits, via emotional catharsis (venting out of negative feelings and emotions), confrontation (challenging and accepting the previously inhibited emotions, resulting in physiological stress), cognitive processing (developing adaptive schemas through reorganizing and seeing the traumatic experience in a new perspective) and exposure (reduction of negative emotions through repeated writing of traumatic events).

These benefits could be more evidently noticed by the self when written through hands in notepads rather than typing in laptops (mobile phones) since the visual recognition of letters and words are more pronounced and an individual has to manually form and write each letter in case of handwriting, which might not be present in case of typewriting.

The Long-term habit of typing in keyboards and the lack of practice with handwriting might lead to lasting effects on general motor

features especially a loss or a deterioration of fine-motor skills (Sulzenbruck et al., 2011). In addition to this, research studies have found that the reduced friction in touch screens (tablet or mobile surfaces) and the change in the Proprio-kinesthetic information while typing may lead to negative effects on handwriting kinematics and legibility of letter formation (Alamargot et al., 2015).

Technological advances might have proven to be valuable in reducing the time and efforts of individuals in the execution of various kinds of works, nevertheless, it couldn't match the efficiency and effectiveness of handwriting since

the latter enhances the value of the written content and portrays it precisely in a genuine way. In today's world, it remains impossible to avoid the usage of digital technologies however one could more likely reduce its usage through subsequent efforts and self-control. The use of digital technologies could be reduced by narrowing down its usage for immediate important works rather than clinging on it even for minor tasks.

In short, technological advances should be an aid for constructive cognitive development rather than becoming the reason for the intellectual deterioration.

*'I love writing, not typing
I love talking, not chatting
I love to see your expressions, not your emoji's
Day by day technology was growing
Our emotions, expressions are becoming digital
And our characters are turning into fictional.'*

-Nawaaz

YOUR SECOND BRAIN

- Ganga S



Ever had a gut feeling..! Then, that's the signal from the second brain in the gut.

With 100 million neurons and its own nervous system - the Enteric Nervous System (ENS), the gut, is more than just a food processing organ.

The Enteric Nervous System in the gut serves as a “Second brain” that has the ability to function autonomously without relying on the brain and the spinal cord. ENS extends from the oesophagus to the anal sphincter and it communicates with the Central Nervous System, (CNS) sympathetic & parasympathetic nerves.

Neurons from ENS also reach the prevertebral ganglia, the gallbladder, the pancreas and the trachea. The brain also provides input to the ENS via hormonal pathways, such as the hypothalamic-pituitary-adrenal (HPA) axis.

The basic functions of ENS include control of motility, regulation of fluid exchange and local blood flow, regulation of gastric and pancreatic secretion, regulation of gastrointestinal endocrine cells and various defence reactions of the gut. The evidence from *Hydra* (a small freshwater organism) shows that the Enteric Nervous System

evolved even before the CNS (Annahazi, 2020). All these complex connections of the ENS in the gut shows that its function goes beyond just food processing.

Being home for several neurotransmitters and its connection with the brain through the gut-brain axis, the second brain undoubtedly influences human mood, learning and memory. One best example is the neurotransmitter serotonin, a happy hormone, which has its 95% of origin in the gut (Carpenter, 2012). Moreover, the gut-brain axis goes beyond the gut and the brain, where our old friend - bacteria, comes in.

The gut contains bacteria which is 10 times the total number of human cells. This microbiota has a crucial role to play in the gut function which is evident from the gut-brain axis, which also involves microbiota-gut-brain axis. Research indicated the relationship between the abnormal microbiota in the gut and various mental disorders ranging from depression to schizophrenia (Liang, 2018). Thus regulating our old friends: bacteria in the gut, have the potential to serve as an effective therapy base for various mental disorders. There is also a connection found between autism and the gut-brain axis.

Research shows that, like the shared neurons between the gut and the brain, the shared gene mutation between the gut and the brain may be the cause, which might be the reason for 90% of people with autism suffering from gastrointestinal issues (Hozie, 2019).

Another study showed that the drug which inhibited the release of serotonin from the gut counteracted the bone-related disease osteoporosis in postmenopausal rodents (Hadhazy, 2010). This study brings in two unrelated elements, the bone and the gut, together. The gut also plays a crucial role in the body's immune response, as 70% of the immune system is targeted at the gut to remove and kill the antigens.

Apart from the known functions of ENS, the disturbances in the microbiome-gut-brain axis are related to several disorders like Parkinson's and Multiple sclerosis. With its closer connections with CNS, a lot of disorders of CNS have its manifestations in the gut and vice versa.

A better understanding of the functions and structure of the Enteric Nervous System and the gut could be the prominent way to develop better therapies for these disorders.

CREATOR'S TIME - THE BRAHMA MUHURTA

- Aditya Narayanan A



Do you really wake up early in the morning? Daily or once in a while? For all who answered no, counting me into that list, let us explore the vast benefits of the practice of waking up early, multi-dimensionally.

Waking up before the sun rises and leading a set- pattern of life is a dream for many. For many youngsters, this is possible only in their dreams. The most difficult process for many students today, is sleeping soon and waking up early. Staying up late at night to finish assignments, to study for an examination or staying up late with the gadgets has become a normal routine for youth.

Based on the sleep-wake cycle, people are classified as morning chronotype and evening chronotype. A person who sleeps and wakes up early is classified as a morning chronotype and one who has a delayed sleep and wake is classified as evening chronotype. A research data available at the Harvard Dataverse platform, shows that evening chronotype students are prone to higher levels of stress and anxiety compared to their counterparts.

Why do we need a proper sleep-wake cycle? The circadian rhythm, that is the biological clock in the human body regulates every biological process

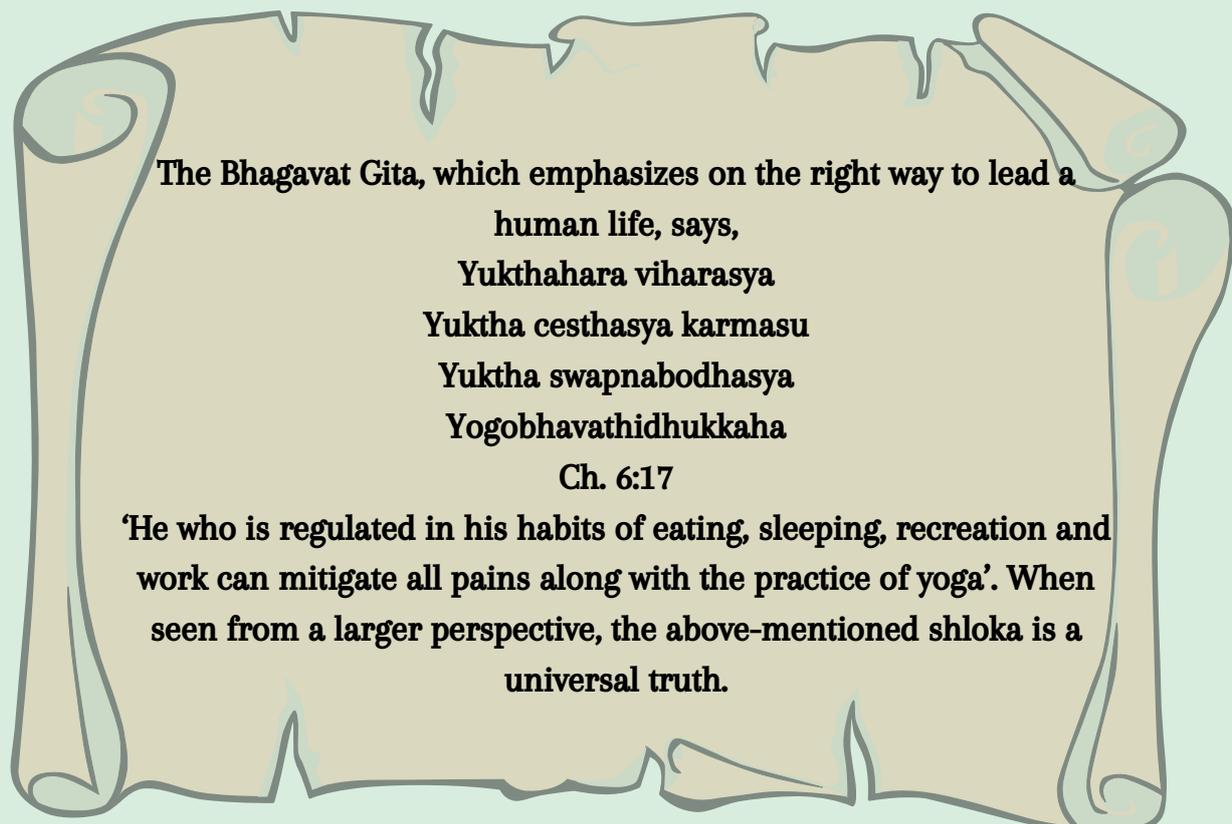
that takes place in the body including the sleep-wake cycle. It induces sleep when the body requires and naturally wakes us up. Our body is benevolent enough to allow us to alter this natural rhythm and lets us modify it according to our whims and fancies.

Does changing the natural rhythm have an impact in the long run?
Scientifically, yes!

A delayed sleep-wake cycle causes a lot of physiological and psychological problems in an individual. The very first verse written in any Ayurvedic textbook while explaining about the daily regimen to be followed for health and long life is about sleep hygiene, which begins with waking up in Brahma Muhurta.

Brahma Muhurta is one among the ancient traditions in the Indian culture, which speaks about the benefits of waking up early in the morning.

To be precise, it is the time between 4:24 and 5:12 am. In the traditional dimension, it is said that Brahma Muhurta is an auspicious time. It is the right time for all educational, spiritual and yogic seeking. Albert Einstein said, “Science without religion is lame, religion without science is blind”, and this traditional concept of Brahma Muhurta is scientifically proven with a lot of research. Scientific research has determined that in Brahma Muhurta, the oxygen level in the atmosphere is almost 41%, which is beneficial to the lungs and brain, as higher oxygen levels keep the brain active for a longer time.



Tuning our biological clock to the rising and setting of the sun is the best way to reverse the ageing process. Waking up during the Brahma Muhurta puts us in perfect synchronization with the natural clock.

According to the International Journal of Yoga and Allied Sciences, the Nascent oxygen available in the atmosphere in the early morning easily mixes with haemoglobin forming oxyhaemoglobin, which has many benefits that include boosting of the immune system, increasing energy level, maintaining a balance of pH level, relieving pain, soreness and cramps.

Can this be explained in terms of allopathy? The answer is a big yes! Melatonin is a secretion of the pineal gland in the brain which is at its peak at midnight and reduces towards the dawn, that is during Brahma Muhurta. It is a hormone that induces sleep. Melatonin is medically seen as a mood stabilizer. The fall in melatonin is accompanied by the secretion of cortisol, which is an anti-stress and anti-inflammatory hormone whose levels are high in the early morning. During Brahma Muhurta, which means 'the Creator's time', high levels of cortisol keeps the mind relaxed and calm.

The brain is like a sponge and it tends to absorb things easily. It is the most suitable time for anyone who is in the quest for knowledge. It is also the most ideal time for yoga, meditation and spiritual activities.

Why did great inspirational people like Gandhi and Swami Vivekananda meditate? Meditation is an activity that gives us a lot of insight and introspection. Swami Vivekananda said, "Concentration is the essence of all knowledge". All these various concepts of concentration, meditation, yoga and education are found to share a common ground during Brahma Muhurta.

Amidst the inference from ancient and allopathic views, I took myself to the task and compared my retaining ability while studying in the Brahma Muhurta and during other times in a day. I observed that my ability to grasp during Brahma Muhurta was much more superior than any other time.

While writing this article it suddenly struck me what my friends used to say. They argued that they had a particular time in a day when they were able to concentrate and study well, and that was not necessarily in the early morning.

In fact, everyone has a prime time in a day when our cognitive faculties are high. For example, the prime time in a day for some might be between 4-6 pm or 7-9 am or any other time. But it is during Brahma Muhurta, apart from all the above-mentioned technical facts, many simple factors come in our favour such as the mind is fresh after a good sleep, generally, the environment is quiet, the brain is more alert and we are less distracted.

Students who prepare for examination tend to follow the wrong pattern of preparing throughout the night. The right amount of sleep for students and

adults will be between 9 pm and 4 am. Altered cycle causes increased anxiety that reduces their actual performance.

What prevents most of us from rising early? I want to change but it is difficult to alter my flawed pattern, what should I do? The answer is simple, introspect. In fact, introspection is a psychotherapeutic method that helps us gain insight into our feelings and behaviour. So, let us understand the benefits and march towards a healthy practice, as M.K. Gandhi said, “An ounce of practice is worth more than tons of preaching”.

THE FAMILIAR CASE OF PEER PRESSURE

- Vijayadurga R



Peer pressure is a direct influence on people by peers. It is the effect on an individual who gets encouraged to follow their peers by changing their attitudes, values or behaviours to conform to those of the influencing group or individual.

Peer groups are usually cliques of friends who are about the same age group. Peer pressure can influence how the children dress, what kind of music they want to hear and what kind of behaviour they engage in, including risky behaviour.

It begins as soon as children start to pay attention to what other children think about them.

Peer influence can occur in the very early school years and grows into adulthood and can persist even in the later years of life. Susceptibility is greater for children who do not have a lot of friends and want to protect the friendships they have because they are worried about losing their friends and have difficulty in making new ones.

There is a gender difference in peer pressure. Boys spend much more time in groups, whereas girls tend to spend their time in friendship dyads. Boys need the approval of a larger group, whereas girls are much more focused on getting along with one or another particular individual.

There is more individual influence on girls while boys are going to be subjected to the forces from the group. Peer pressure can be positive or negative and direct or indirect. It can be identified when there is a behavioural change in the children, especially when they are with a certain group of friends.

They tend to try new things, focus on their image and make comparisons. Sometimes they feel unfit for the group as they do things they usually dislike to do and the performance of those children in school will also change. Positive peer pressure is the encouragement by peers to do something good. For example, joining an athletic team, helping out others, influencing to get better grades and convincing one another to have good habits. Positive peer pressure works better in children than parental pressure.

An individual's response to peer pressure depends on factors like maturity, confidence, personality traits, etc., Peer pressure can also be negative as it may have effects that can lead to a variety of issues which can have devastating effects like smoking, drinking alcohol, drug abuse, reckless driving and risk-taking behaviour in general. Peer pressure is one of the most notable aspects of

adolescence to which teenagers are exposed. Parents should care more about their children at this stage to overcome peer pressure. Poor parental monitoring and inconsistent discipline directly influence negative behavioural outcomes. To overcome this peer pressure, parents must take an active role in their children's life. They need to talk to their child and their friends, most importantly make an effort to cultivate a positive personal identity and self-esteem.

Negative peer pressure can be avoided by saying a firm "NO" to negative things and avoid getting involved in uncomfortable situations. There is a need to act wisely by thinking about the consequences of the actions, choosing the friend group cautiously, and being true to oneself.

Parental involvement is the key to deal with negative peer pressure. Strong support from the family and the ability to differentiate between positive and negative peer pressures and being skilled to choose friends wisely is the best way to keep away from negative peer pressure.



CHANTING INVOKES POSITIVE EMOTIONAL SCHEMA

Religious chanting and praying have existed throughout the history of humankind's civilization, in both eastern and western societies and in ancient and modern times.

Religious chanting or praying is widely practised to cope with negative or stressful emotions. During hard times, the chanting is mainly done to detach oneself from the pain. Religious activities are generally not regarded as rational or logical from a scientific point of view.

A previous functional Magnetic Resonance Imaging (fMRI) study (Wiech et al., 2008), found that religious contemplation can help individuals to reinterpret the emotional significance of pain,

making it easier for them to detach themselves from the experience of pain. A previous event-related potential study showed that religious chanting could significantly diminish the late-positive potential induced by negative stimuli.

However, the regulatory role of subcortical brain regions, especially the amygdala, in this process remains unclear and the underlying neural mechanisms have not been investigated to a sufficient extent.

No previous study has directly examined the mechanism of repetitive religious chanting on harmful emotion modulation.

A survey by Jungling Gao et al., in 2020 can explain the positive effects of spiritual practices from a neuroscientific perspective. This multimodal MRI study aimed to clarify the neural mechanism underlying the effectiveness of religious chanting for emotion regulation.

This qualitative study consisted of twenty-one participants who were recruited for a multimodal MRI study. The participants' age ranges from 40-52 years, eleven were females, and ten were males and all participants had at least one year of religious chanting experience.

Firstly, the participants were asked to view neutral or fearful pictures while practicing sacred chanting, non-religious chanting, and no chanting. A 3.0 T Philips MRI scanner was used to collect data and SPM12 was used to analyze the imaging data. Voxel-based Morphometry (VBM) was used to explore the potential hemispheric asymmetries in practitioners.

The findings showed higher brain activity in certain regions during religious chanting - fear when compared with religious chanting - neutral.

The related areas included parts in the fusiform gyrus, bilateral occipital lobes, prefrontal lobes, thalamus, the amygdala, parahippocampus and cerebellum. The long-term religious chanting experience participants showed a mainly rightward brain asymmetry, including the temporal lobe and the limbic system.

Compared with either non-religious chanting or no chanting, spiritual chanting results in more robust engagement of subcortical regions in experienced participants and asymmetric activation of the amygdala. The study demonstrated an asymmetric brain function pattern and structure concerning the effect of religious chanting on fearful emotion regulation.

It revealed that repetitively and religiously chanting results in increased brain activity, especially in the left amygdala, particularly when confronted with stressful stimuli. A significant association of amygdala activation levels solely between religious chanting and religious chanting- fear was seen, but not between sacred chanting and religious chanting- neutral.

This indicates that religious chanting may directly affect the reactivity of the amygdala, especially the left amygdala. Other subcortical regions, including the thalamus, para-hippocampus and brainstem showed high religious chanting - ear condition activity.

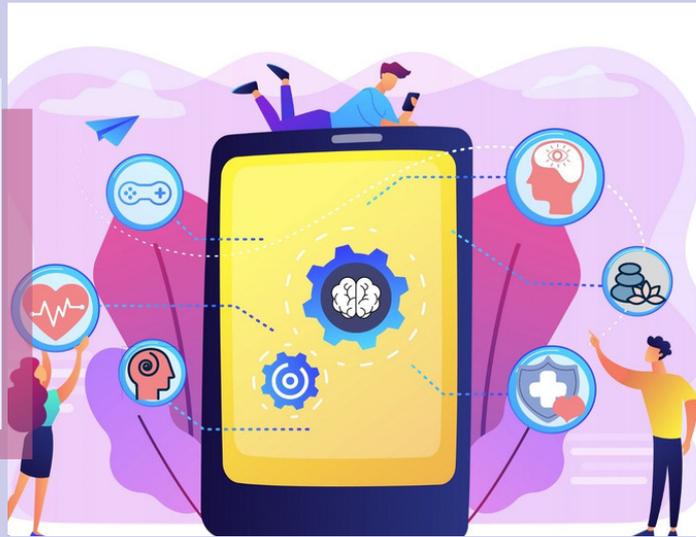
Increased activity during sacred chanting was also evident in the midbrain. Religious chanting- Fear also induced more significant movement in the bilateral occipital region, parietal lobe and other subcortical regions of the brain compared with non-religious chanting and no chanting. The MRI analysis of anatomical asymmetry also illustrates inter-hemispheric differences in the superior temporal lobe, precentral region and cerebellum.

A detailed study can help to further build the technique of chanting or praying and it can be used as a part of behavioural or cognitive procedures to reduce stress, pain, etc., before starting any phobia related treatment like systematic desensitization, relaxation techniques like JPMR are used. Now, this technique can be used in people with strong religious beliefs. This might also prove to be more effective than other relaxation techniques due to the patient's strong religious faith.

Amygdala and other subcortical regions are responsible not only for the emotions but also for many other factors. So further exploration in this area will help in knowing more about other factors too.

Condensed by :
Resni TR

GAMIFYING MENTAL HEALTH INTERVENTIONS



The Pandemic of the 21st century, not only tested and highlighted the gaps in physical health care systems but also shed light on the various lacunae in mental health care across the world. There is always a ‘research-practice gap’ when it comes to mental health services, with less than 35% of individuals having access to therapy and psychological care.

With increasing psychological distress among young people, there is a pressing need for accessible and affordable therapy tools. The ubiquity of smartphones offers a delivery platform for such tools, which could be effectively used to bridge the research-practice gap.

Many research suggests that gamification, that is, turning intervention content into a game format, could increase engagement with prevention and early-stage mobile interventions.

This study aimed to explore the effects of a gamified mobile mental health intervention on improvements in resilience by conducting a randomized controlled trial in which the 1st group of participants used a gamified mobile mental health app: *eQuoo*, the 2nd group used a non-gamified mobile mental health app, the 3rd group were assigned to the waitlist group, who received no intervention, but completed the questionnaires.

In the 1st group, for each level, the player learns two psychological skills extracted from CBT therapies, positive psychology therapies and systemic therapies by the gamified *eQuoo* app.

The *eQuoo* app educates the 1st group of participants about various psychological concepts through psychoeducation. It is taught with the help of an avatar called ‘Dr. Joy’.

Moreover, 8 gamification elements: levels, progress feedback, points (as coins), narratives, personalisation, customisation, mini-games and badges were included in *eQuoo*. The 2nd group (control group) was asked to download a free app called *CBT Thought Diary*, in this Non-Gamified app, the participants perform typical CBT Exercise and maintain a mood diary and a gratitude journal.

In total, 358 participants completed a 5-week, randomized controlled trial. The study questionnaires were administered to all participants on 1st, 17th and 35th days of the study. Repeated-measures ANOVA revealed statistically significant increases in resilience in the test group compared with both control groups over 5 weeks.

The results indicated that the gamified app significantly increased personal growth, positive relations with others, and reduced anxiety. *eQuoo* retained 21% more participants than the control or waitlist groups were the 1st group showed 90% adherence to the study.

Intervention delivered via *eQuoo* significantly raised mental well-being and decreased self-reported anxiety while enhancing adherence in comparison with the control conditions.

In the United Kingdom, *Bant*, a gamified app, used incentives to improve glucose monitoring in diabetic adolescents and also www.keas.com is a platform which encourages a healthy lifestyle among colleagues through online games. These gamified apps are effectively delivering physical health care interventions in the UK.

So, gamification of mental health interventions could also be an effective strategy, which will help in more affordable and accessible mental health care interventions along with increased adherence to the interventions. As the mental health concerns come with the huge economic costs, gamification of the mental health interventions would not only help in the individual level i.e., effective coping but also significantly contributes to the nation's economy.

Condensed By
Ganga S

SCREEN TIME VS GREEN TIME



Nowadays we come across more news and information concerning children being affected with anxiety, depression and other mental illness. This has increased to considerably a larger extent in current pandemic situations.

The larger exposure to Screen Time (ST) not only affects physical health but it also affects the person's mental health. The reason for this increased mental illness may be attributed to more exposure to screen time which drastically reduces the green time.

Larger use of screen-based technologies like mobile phones, laptops etc., can displace protective behaviours. Thus, they may deteriorate our psychological well-being.

Children feel the need to immediately respond to texts, social-networking messages, and other notifications. Mostly teenagers check their device at least hourly but it is the natural environment which will promote concentration, stress reduction, increase in academic achievement, self-esteem and aid positive well-being.

The studies systematically reviewed by Oswald et al., were quantitative, involving analysis of original data, and provided a measure of association between the exposure and outcome of interest. The study includes data analyses from 4 databases namely PubMed, PsycInfo, Scopus and Embase.

The study consisted of screen time exposure, green time exposure and both screen and green time together and psychological outcomes in age groups of < 5 years, 5-11 years, 12-14 years and 15-18 years.

The age group of < 5 years ST exposure shows a harmful association with cognitive development, language, communication, emotional and social development. In 5-11 years, ST is mostly associated with depressive symptoms, emotional development, being short-tempered and sleeplessness. In the age range of 12-14 years and 15-18 years, total ST was associated with lowered health status, quality of life, school life satisfaction, low self-esteem especially in girls, and lower academic achievement.

In Green Time (GT) research, the age group of < 5 years includes superior prosocial behaviour, good cognitive development, good language command. In the age group 5-11 years, GT was reported as beneficial, associated with reduced anger, good cortisol level, increased memory capacity and grades, increased energy and happiness.

In the group of 12-14 years and 15-18 years, GT includes a decrease in stress, increase in self-esteem, self-efficacy, increase in academic performances and positive well-being.

In certain studies, it was also found that cell phone addiction had a direct relationship with increased anxiety, depression, insomnia and suicide intentions. A researcher revealed that teenagers who spend more hours on their gadgets are more at risk of suicide. They indicated that low emotional stability, chronic stress, and depression correlate with phone usage.

The study concludes that nature is under-utilized in this high tech era because of more exposure to screen time rather than green time.

Even in Indian students, a recent study conducted shows that they are addicted to more screen time, mostly in older students (more than 15 years of age). Educational institutions should frame policies that can be mandatory or voluntary to limit the time or use of electronic gadgets.

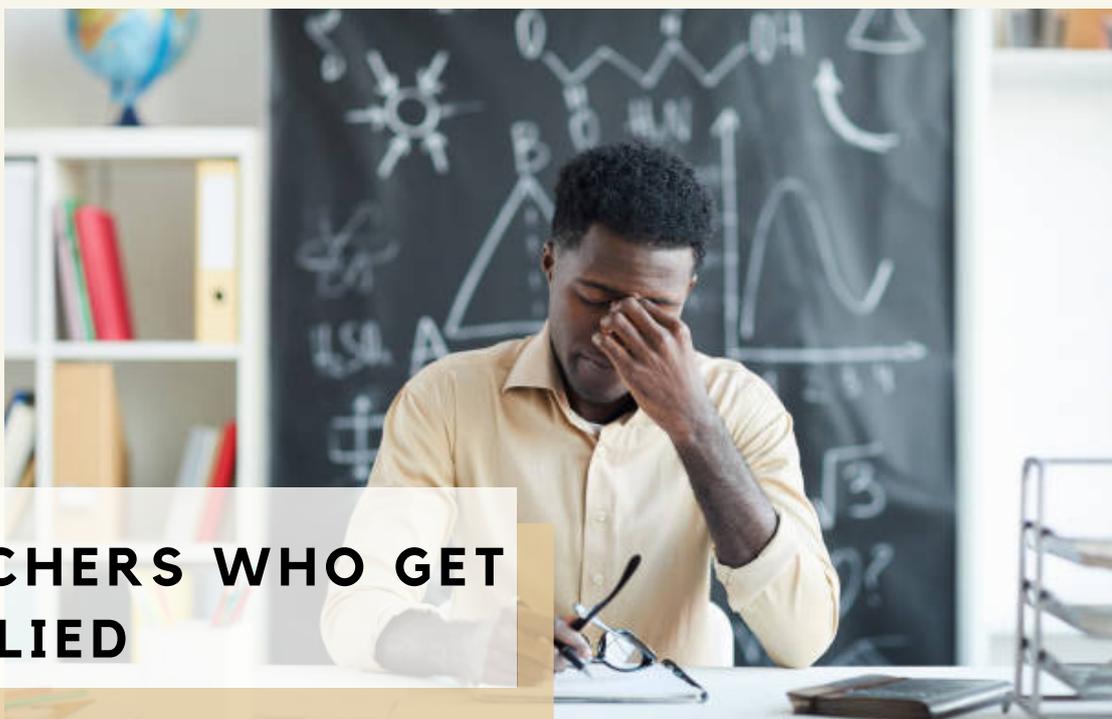
There is a need for creating awareness on constructive use of social media, IT and alarm should be raised for its excesses. Both at home and in school, emphasis should be laid on participation in sports activities.

Kids should be encouraged to inculcate the habit of playing outdoors and sports can be made compulsory in the curriculum.

Children can be involved in specific activities such as gardening, walking barefoot on the grass in parks or gardens and other outdoor activities.

This would help people refresh their minds and stay connected with nature for the benefit of positive psychological outcomes

Condensed by :
Tejasvini Ponnambalam



TEACHERS WHO GET BULLIED

Bullying at school is a well-known thing to us. But less is known about the bullying that is aimed at teachers. The professional and purposive association in the classroom which contributes to the success of education is derailed when students bully teachers. This even hampers the desire among those who are passionate about teaching; which is why the National Education USA has defined bullying of teachers as an “Overlooked crisis”.

Bullying is the situation of being constantly exposed to negative behaviour and even being unable to defend oneself from it. Bullying among teachers can range from it being physical (with an occurrence of 34.6%), verbal (27%) and cyber (6.6%).

Verbal bullying, the most common type, includes mocking, name-calling, adjectives and nouns. Hitting, kicking with the feet and others are kinds of physical abuse. A study establishes verbal and physical harassment as direct forms of bullying; and emotional and psychological abuse as indirect forms of bullying. The latter is more secretive where the perpetrator hurts the victim without an explicitly obvious intention of doing so.

Spreading rumours, excluding them in social situations, making mocking facial expressions, abusing i.e., sexual, deliberately ignoring the teacher, being inattentive in the class intentionally etc., are all examples of indirect bullying.

The research at focus intends to understand the occurrence of bullying among varied groups of teachers (male and female).

Exploring the correlation between the subjection to bullying and the attitude of teachers towards teaching as a profession was the study's other aim.

The experimenters have employed an analytical descriptive method on the sample of government school teachers (male and female) in Qatar. The tool consisted of 13 paragraphed items that measured the variables into consideration.

Verbal and physical bullying was prevalent in 31.75% and 7.5% respectively among direct bullying. Teachers of both sexes reported that 62.1% of them experienced students uttering profane words in front of them. Teachers who were males were additionally exposed to bullying than females. It was discussed that, since only males teach males in Qatar, the probability of male teachers being exposed to bullying is more since male students tend to be bullies more than female ones do.

This is also said to have a lot to do with the teaching method and the classroom environment. The female teachers make it more positive which is perceived as fun and exciting for the students. Results further indicated that 31.5% of teachers wished they had not been into the teaching profession and 87.6% believed that teaching is a harder occupation than others.

Statistics say that the number of teachers decreased despite the increase in the number of schools from 2013 to 2018. It was further inferred that this could be because of the lack of appreciation of teachers.

The findings of this research imply its use to the administration section of the school and even the government. Parents, teachers and students are benefited from it as it helps them analyze the root cause of the never-ending effect that comes from the bullying of teachers. This paper can also help build practical strategies to counter the very occurrence of bullying.

Condensed By:
Ashika A



FROM #RELATIONSHIPGOALS TO #HEARTBREAK

Being in a good and healthy romantic relationship could be a desire for many. Every typical relationship goes through phases in which the priority, needs, actions, feelings, etc., are different. In the initial phase when the relationship has just begun, the priority of the couple is mostly towards each other in terms of spending time, having strong feelings and tending to impress each other.

Throughout the next phase, their energies focus on establishing themselves like moving in or even getting married. If the relationship ends with a breakup, each one makes up a different narrative of the events that favour them. Therefore, when we talk about interplay in relationships, online

platforms stand at an important place. In the digital era, the dynamics between people in romantic relationships has changed at various levels. Even dating sites provide the initial virtual contact at the beginning of the relationship. Social media helps couples communicate faster and to share updates about their relationship with fellow users.

Different situations demand different individual needs, characteristics of activity on Social Networking Sites (SNSs) type of content shared and even the time spent online. It goes without saying that these changes in relationship statuses and phases (whether it's the beginning or after a breakup) changes the nature of the online activity itself.

Instagram is one such SNS that the users of today opine that it allows privacy. The subjects (ageing from 20 to 25 years) revealed that Instagram gives them absolute and honest control over their activity. Since it permits the user to use it up to their needs and satisfaction, the activity of users on Instagram may vary from using it as a 'diary' to using it for 'self-presentation and impression management'.

Though previous researches have found the effect of social media on relationships, this paper aims to determine the impact of relationships on Instagram activity. The research problem questions how social media (Instagram) activity changes based on the status of a relationship. It also attempts to find out its function in determining the user's offline life depending on their relationships.

To do this, a multi-method approach (qualitative and quantitative by taking interviews and questionnaires respectively) was employed. The results pointed towards the fact that after a breakup, if the ex-couple still remain "friends" on Instagram, they get to observe each other's activity and even post indirect

messages that are so subtle that not every acquaintance can understand but strong enough for the message to reach the ex-partner. Such behaviour is termed as 'Social Steganography' and is mostly practised by adolescents and young adults. It was also noted that youngsters do things just for the sake of sharing them on Instagram.

For example, visiting a place that is associated with the ex-partner and subtly addressing the message to them on Instagram. Thus, the nature of the online activity was also determined to impact and influence offline behaviour.

In consistent with earlier studies, the experimenters have indicated that during the initial phase of a relationship where the energy of the couple is completely focused on each other, their frequency and extent of being online is relatively much lower than after breakup. Initially, they post lesser pictures that are meaningful and personal.

Since there seems to be ample time for everything else after a breakup, the online activity (posting updates) becomes frequent too.

As mentioned earlier, the increased time spent on Instagram could also be directed towards being conversant with the activities of the ex and attempting to deliver hidden and indirect messages for them.

Apart from that, deleting dyadic pictures of the ex-couple was found much more common than archiving them or not deleting them at all.

This study also establishes that higher engagement of a couple on social media can foster jealousy and dissatisfaction in the relationship (two other variables that the questionnaire measured).

Reinforcing the conclusions of existing studies, this one stated that those individuals who are insecure about the feelings of their partners are more likely to declare and announce their courtship on SNSs which in turn ignited jealousy among the partners.

From this, the prominence of online communication in romantic relationships is understood, where it diminishes the likelihood of being in a long-term relationship. This research implies that stable relationships observe much lesser importance of online communication.

**Condensed by:
Ashika A**



GREENER SCHOOLYARDS, BETTER FUTURE

Nowadays, it is seen that children spend most of their time indoors in the company of technology and do not spend as much time in nature. Nature connectedness, which refers to the understanding of the interrelation and dependence between oneself and nature, is lacking in today's children largely due to factors such as urbanization, overscheduling of children's life, lack of green space in the surroundings and less outdoor playtime due to a greater inclination to mobile games.

The alienation of children from nature has grown to an alarming extent. Richard Louv in his book, 'Last Child in the Woods' has shed light on the severity of this phenomenon using the term, "Nature-Deficit Disorder".

Nature-Deficit Disorder refers to the idea that the decrease in spending of time outdoors by human beings, especially by children can have negative effects on their well-being. These effects include behaviour problems, decreased attention, anxiety, to name a few.

With the importance of spending time in nature being emphasized and proved time and again, it is suggested that children get opportunities to connect with nature in schools and there has been growing support for the same.

A study was conducted with the aim of exploring and comparing the effects of schoolyards in children's perceived restorative experience, attitudes towards nature,

connection with nature and social competencies. A total of 132 children of 3 different elementary schools with different schoolyards participated in the study. The schools chosen included a school which has a cement yard with a few trees, a school with green areas and a school where most of the yard was earthen and which also had a vegetable garden which was cultivated by the children of the school as a part of the ongoing garden-based learning program.

The results of the study confirmed that greener schoolyards lead to greater perceived restorative experience in children, with the children of the school with green yards and school with earthen yards and vegetable garden having greater perceived restorative experience.

Additionally, it was seen that the perceived restorative effect was stronger for those children who had lesser contact with nature, indicating that greener schoolyards can buffer the

effects of low contact with nature outside school. Though the effect of schoolyards on the social competencies of the children could not emerge, it was seen that children of the school with the earthen yards and a vegetable garden had more positive attitudes and connect with nature as compared to the children of the other schools in the study.

The finding of this study shows that greener schoolyards do contribute to help children have a better perceived restorative experience, in developing positive attitudes towards nature and a stronger connection with nature.

Designing schools with greener schoolyards and including activities like the cultivation of gardens by children as a part of the curriculum can be considered as an option to help children direct their attention to nature and to engage more actively with nature. This will help children derive benefits, that they may lose out on due to decreased nature connectedness.

Condensed By :
Harshitha M

THE DARK SIDE OF GRATITUDE



Gratitude is a universal emotional response to other's kindness and it enhances pro-sociality, cooperation, altruistic (third party) punishment and reduces cheating and economic impatience.

It is proposed that gratitude in nature promotes high-quality personal relationships, as it boosts self-sacrifice and facilitates self-control, both of which are conducive to relationship promotion.

The quality of a relationship is indicated by three relational features: including the intent of the partner, the cost to the partner in offering the benefit, and the value of the benefit.

These three relational features are found to be antecedents of gratitude that helps individuals to find high-quality partners. When a high-quality partner is found, gratitude coordinates individuals' response to the partner, which promotes their relationship and benefits individuals in the long-term.

So this characteristic may consequently result in neglect and devaluation of other objects on the opposite side of relationship promotion.

Based on the above statement, this study investigated whether gratitude leads individuals to violate two widely accepted moral norms i.e., honesty and justice for their benefactors and also

explored the associated psychological mechanism (harm aversion, moral judgment, moral principle, concerns for one's own benefits, concerns for the victim's losses and anger) using self-report measures, computational modelling and mediation analysis.

The findings of the study show that gratitude increases individuals' moral violation when the violation protects their benefactors from harm because gratitude draws individuals' attention to promote personal relationships, and hence causes the neglect of moral norms.

Therefore, a strong relationship-building tendency may lead to this effect. The effect of gratitude on moral violation was mediated by relationship-building tendency and harm avoidance in sequence even when the effects of other psychological factors associated with moral violation being controlled. In addition, there was a positive correlation between relationship-building tendency and relational utility (utility of a partner for the achievement of individuals' personal

personal aims such as obtaining benefits).

Finally, serial multiple mediation effect reveals a process like this: A grateful individual generates relationship-building tendencies and this tendency guides the grateful individual to consider the benefactor as a friend and an aversion of harming the benefactor just like aversion of harming their friend. Thus, the aversion to harm eventually causes individuals violating moral norms for protecting the benefactor.

The findings of another study revealed that individuals in the expressed gratitude condition with unresponsive partners had stronger negative emotions than individuals in the control condition with unresponsive partners. So it offers a caveat that artificially injecting gratitude (an expressed gratitude practice) into a romantic relationship when the partner is unresponsive may backfire.

“Please don't invent a debt that does not exist, or next you will be trying to feel gratitude and that is the treacherous first step towards complete moral degradation”.
- Robert A. Heinlein (1987).

Condensed By:
Negha SB

SURFACE WATER QUALITY IMPROVEMENT DURING COVID-19



Twenty-five years ago, AV Krishna Kumar, a 65-year-old farmer at Erode stopped at Kalingarayan canal to wash his *veshti* without using soap in the immaculate water. "The water was that clean" said the farmer. Today surprisingly he discovered his dearest trench, which inundated 15,743 sections of land in the region, as clear as it was twenty years back. Material and tannery handling enterprises, accused of releasing effluents into these waters, have been shut because of the lockdown. The story is comparable in different pieces of our nation.

Anthropogenic activities are one of the key factors of pollution in all spheres of the environment. The factories and people's activities have been shut down in many parts of the world for a month or more due to the COVID-19 lockdown and

It is expected to show some change in the prevailing conditions in the above mentioned environmental areas. As predicted, the level of carbon emissions has fallen dramatically in a matter of days. As indicated by the Ministry of Ecology and Environment - China, the air quality went up 11% in the category 'good' of 337 urban communities. Such changes in natural pollution are considered impermanent; the current degree of contamination will be much lower in the atmosphere, biosphere, and hydrosphere than in the pre-COVID-19 era.

During the lockdown period, the major industrial sources of pollution that affect aquatic ecosystems, such as industrial wastewater disposal, crude oil, heavy metals and plastics have minimised or completely stopped.

Thus, the level of pollution is expected to reduce. For example, the Ganges, a sacred but severely polluted river in India, turns cleaner at several places during the nationwide lockdown period. Similarly, in Cauvery, Godavari, Krishna, Tapi and Yamuna due to reduced human activities and closure of industries.

Contrastingly, the water quality in Beas, Chambal, Sutlej and Swarnarekha has declined due to high sewage flow and lower water volumes. A study was conducted in Vembanad Lake about the water quality before and during the COVID-19 lockdown period to analyse the status of water pollution. Vembanad Lake, the longest freshwater lake in India, is located in the state of Kerala.

The main income source of the lake is local tourism (boathouse) and aquaculture.

The previously conducted research has reported a high concentration of toxic materials found in the surface, subsurface sediments samples and also from fish samples due to the nearby industrial effluents. SPM concentration from April 2013-2020 was reported the lowest during lockdown than the pre-lockdown period by 15.9%. The decrease was observed in 18 out of 20 zones of the lake.

These results signal the need for strong grounded rules to preserve the lake and look for a sustainable solution.

"In one drop of water are found all the secret of all the oceans"

-KAHLIL GIBRAN

Condensed By :
Asmaa A



MATERNAL STRESS AND PREGNANCY

Maternal stress is highly known to influence the development of a child's behaviour and its emotions. Maternal stress is usually measured using various questionnaires which are not always reliable. A recent research study has aimed to find the link between maternal stress and baby's brain development.

The study involved hair samples taken from 78 pregnant women to check the level of cortisol in them. Cortisol is a hormone which is involved in the body's response to stress, it is also known as the stress hormone which indicates high-level stress with a higher level of cortisol.

The pregnant women's babies underwent Magnetic Resonance Imaging or MRI to note the brain's structural changes and connections.

The results showed a strong connection between the maternal stress and structural changes in baby's brain as a higher level of cortisol in pregnant women has led to structural changes in baby's amygdala, an area of the



brain which is involved in emotions and social behaviour & development, the result also showed the differences in baby's brain connection.

These kinds of research studies always signal the importance of care and support given to pregnant women before, during and after pregnancy to have a healthy child, as a child's life starts from the first beat of its pulse within the womb.

Condensed By:
Pooja V



INFLUENCER MARKETING

Social media - this word creates hype among people mainly for its entertainment factor. Content creators are individuals who build a reputation for their knowledge and expertise on a specific topic, make regular posts about that topic on their preferred social media channels and generate large followings of enthusiastic and engaged people who pay close attention to their views.

People are attracted to them for many reasons and thus, the content creators bring in people towards them. These content creators are technically called influencers because their say has an impact on their followers. This bond stirred up the business minds and it resulted in influencer marketing.

Influencer marketing is a type of social media marketing that uses endorsements and product mentions from Influencers in social media.

Influencer marketing works because of the high amount of trust that social influencers build up with their followers and recommendations from them serve as a form of social proof to the brand's potential customers.

Research by Chung- Wha 'Chloe' Ki et al., aimed to find the causal factors that create an attachment and build up trust between Social Media Influencer (SMI) & their followers and how this attachment has a positive effect on their endorsements.

An open-ended survey was conducted through online questionnaires on individuals over 18 years, residing in the U.S who use Instagram frequently.

The results of the study state that SMIs' persona and content-driven attributes that include inspiration, enjoyability, similarity, physical attractiveness, authenticity, informativeness, visual aesthetics, and expertise elevate SMI as a human brand (a social media personality who provides a sense of attachment to followers and yields positive marketing results by fulfilling their follower's needs).

Ideality (the self, people would like to be), Relatedness (how much they relate themselves with the influencer) and Competency (desire to feel capable) are the needs of the followers and it is gratified when they perceive an SMI to be inspiring, SMIs personality as enjoyable and similar of their own and their content as informative.

Thus, it is concluded that both SMIs' unique persona and content curation abilities allow them to satisfy followers' needs for ideality, relatedness, and competence.

This, in turn, entailed an intense emotional bond with their followers. It was this positive emotion shaped with SMIs that transferred to SMIs' endorsements and positively influenced the followers to acquire the products/brands that the SMIs recommended.

In recent times the strategy of influencer marketing is more gravitating in the business field. Even small businesses have started to reach out to influencers for their product branding. Even small businesses have started to reach out to influencers for their product branding. It has turned out that not only celebrities but also the normal people who have a good number of followings and have an entertaining social media profile are seen as Influencers.

Statistics say that Instagram was the top choice in influencer marketing among Indian companies in 2018, and most companies spent between 5% and 7% of their overall marketing budgets on online influencers.

There are a quite number of top listed Indian social media influencers who play a huge part in engaging

and entertaining the audience, creating an indirect personal bond with their followers who are easily influenced even by the simplest products from the market endorsed by them (SMI).

This influence turns out to bring a huge revenue in the market. For example, a well known Swedish based watch company Daniel Wellington has turned out revenue of 220 million dollars through influencer marketing in 2015

considering it was just a 15,000 dollar startup. In recent times, this brand is promoted by many Indian influencers. A source of entertainment is now searing into a source of bunce. Overly during these times of pandemic where every human is glued to their social media accounts, there are high chances for people to be influenced and buy the products which turn out to be “gain with no spend” play for the brands.

Condensed by :
Deborah Princy R



HAS COVID-19 CHANGED ONLINE SHOPPING FOREVER?

The worldwide spread of the COVID-19 pandemic has disrupted how people buy products, services, and the way they perceive e-commerce. Coronavirus COVID-19 pandemic, a world health crisis of our time has caused a great impact on our online shopping behaviour.

With the rising fear about COVID-19, consumers tend to rely more on online shopping considering the security concerns of leaving their safe space. Consumers have switched from shops, supermarkets and shopping malls to online portals for the acquisition of products, starting from basic commodities to branded goods.

“The COVID-19 pandemic has made us shift towards a more digital world.

The changes we make now will have lasting effects because the world economy begins to recover,” said UNCTAD Secretary-General Mukhisa Kituji.

According to a survey with about 3000 consumers in 9 emerging and developed countries, about how the pandemic has changed the way consumers use e-commerce and digital solutions.

With the research methodology of online quantitative research, quite 200 respondents completed the questionnaires for every country with the interview length of quarter-hour per person. The target population for this survey was internet users aged 16 or more.

The survey was conducted by UNCTAD and Netcomm Suisse e-Commerce Association, unitedly with the Brazilian Network Information Center (NIC.br) and Inveon, which shows that shopping products online have increased by 6 to 10 percent in many categories of products. The largest gain was for products of gardening, do-it-yourself, pharmaceuticals, cosmetic and private care categories.

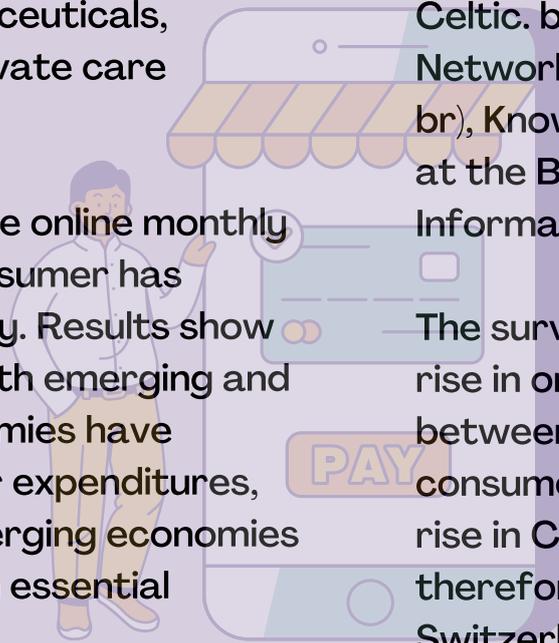
However, average online monthly spending per consumer has dropped markedly. Results show that buyers in both emerging and developed economies have postponed larger expenditures, with those in emerging economies focusing more on essential products.

The tourism and travel sectors have undergone the strongest decline, with average spending per online shopper dropping by 75%. Online buying cosmetics and private care has increased by 75%. For pretty much all the products bought by the consumers, they expect a home delivery rather than picking it from a standard place. About 85% of consumers like to have home delivery.

"During the pandemic, online consumption habits in Brazil have changed significantly, with a greater proportion of internet users buying essential products, like food and beverages, cosmetics and medicines", said Alexandre Barbosa, manager of the Regional Centre of Studies on the event of knowledge Society (Celtic.br) at the Brazilian Network Information Centre (NIC.br), Knowledge Society (Celtic.br) at the Brazilian Network Information Centre (NIC.br).

The survey also shows that the rise in online shopping differs between countries and consumers. With the strongest rise in China and Turkey and therefore, the weakest in Switzerland and Germany. In line with the consumers, women and other people with high school education have increased their online purchase. With the rise in online shopping in most of our houses, it has a greater impact on the research.

In India, BigBasket, a key online grocery player had dropped a message on 25th March 2020, that,



“We'll be back soon! We are currently experiencing unprecedented demand. In light of this, we are restricting access to our website to existing customers only. Please try again during a few hours.” It faced a breakdown because of the outburst. This clearly shows the increase in online shopping behaviour of Indians.

The survey results predict that changes in online activities are likely to outlast the COVID-19 pandemic. Most respondents, especially those in China and Turkey, have reported that they'd continue shopping online in the future.

They also reported that they'd still travel only to local places, suggesting a long-lasting impact on international tourism.

Condensed by :
Hamna. A. A. Wakil



PSYCHOLOGY OF SOCIAL MEDIA POSTS

People are living in an age where technology is taking over everyone's lives. Among them, the internet and social media are the most inevitable. With the substantial increase in the use of social media by the youngsters in the past decade, it is now not merely a tool to connect with the people but became a platform to showcase emotions and feelings through status and story updates and the contents of social media posts are loaded with full emotions.

A research was conducted to examine how far the 'transition patterns of affective words' in social media text are coupled with the personality and mental health of the user. Here 'affect' simply means the feelings and emotion that people express through social media posts.

This study had two objectives, number one is to know, to what extent do the affect patterns of social media posts correlate with the user's personality traits and mental well-being and number two is to know, to what extent does the use of lyrics and quotes in their posts correlates with the user's personality traits and mental well-being.

The study included 70 adult users who were also provided sufficient and regular Facebook data for 2 months. They were assessed for mental well being with Satisfaction with Life Scale, presence of depressive symptoms with Centre for Epidemiologic Studies Depression Scale (CES-D) and the personality is assessed

with a 100-item scale using items from the open-source International Personality Item Pool. All these data were collected using *MyPersonality Database*, which is Facebook's dataset with more than 18,000 users.

The Pearson correlation coefficient is used to assess the significance of correlations between social media data, personality traits and mental well-being.

The results show that more 'extroverted' participants tend to post positive content continuously, this behaviour fits well with the positive emotional core in extroverts stipulated in. The more 'agreeable' participants tend to avoid posting negative content, this could be due to their ability to regulate negative affect. Participants with higher 'neuroticism' tend to alternate between positive and negative content.

The people with higher 'conscientiousness or extroversion' are slightly less likely to follow a neutral post with another neutral post. The gravest finding was that social media

users who were more likely to talk about anxiety were on the higher end of the neuroticism scale. This coincides with the fact that higher neuroticism is associated with high emotional instability.

The link between posting non-original content (quotes and lyrics) and elevated depression symptoms appears to be moderated by neuroticism. This advocates that high levels of neuroticism, prejudice people to depressive symptoms and to an indirect disclosure of emotions through quotes and lyrics.

This research experiment demonstrated the benefits of detailed representations of social media affect for unpacking the relationship between personality, mental well-being, and the content posted on social media. The result vouches for the claim that feelings and moods expressed in the social media data text are associated with social media user's feelings and mood patterns in real life.

Studies like this give ideas about the mental climate of people and help clinicians and patients develop a more comprehensive

view of a person's affect patterns, arrive at a better-substantiated diagnosis and make improved treatment decisions in an ecologically valid, naturalistic context. Also, due to relative ease and low cost of data collection procedure, these studies could be extended to large samples in a cost-effective way. As it is possible to collect the information at various time points, studying psychological constructs over time is viable.

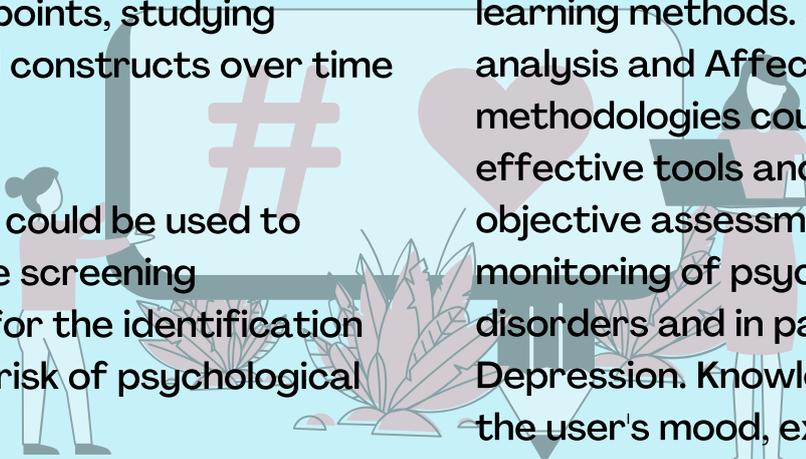
A similar way could be used to develop online screening instruments for the identification of the user's risk of psychological distress.

As in a general discussion, it is necessary to be aware of the tone of social media posts, something can and should be done to identify the seed of potential emotional bursts and depression among the people. Obviously, it is not an easy task considering billions of social media users and sites. But here is a potential approach to this, which is known as the Sentiment analysis.

Sentiment analysis refers to identifying the polarity of sentiment presented in an unstructured non-original post in order to identify whether the expressions indicate positive, neutral, or negative valence toward the subject.

Technically, Sentiment analysis can be done in various ways such as lexicon-based analysis or machine learning methods. Sentiment analysis and Affective computing methodologies could provide effective tools and systems for an objective assessment and monitoring of psychological disorders and in particular, of Depression. Knowledge related to the user's mood, extracted through sentimental analysis and Affective Computing Methodologies, will be provided to medical specialists through a graphical interface, enabling the possibility to monitor and follow-up patients analysis and to adapt assigned therapies.

Condensed by :
Sindhura K





FOOD COLOURING SUGGESTIONS AND PROPENSITY TO EAT

Colour signals the edibility and the nutritional value of food. The colour of the food is very important in determining its acceptance. The colour red is considered appetizing (ripe fruits) whereas, blue is an appetite suppressant (non-edibility). However, research on the effects of red/blue food colouring on the wanting and liking of food has produced heterogeneous results. Red plates and cups have the power to extend our appetite and food consumption. For example, Donalds and Burger King use red logos and backgrounds as a result of it increases people's appetite.

Placebo research by Carina Schintl and Anne Schienle has shown that the desire to eat specific food items can be influenced by verbal suggestions.

The participants were shown with coloured food items and food items in a coloured background. Before viewing, half of them were told that red coloured food will increase appetite and blue colour is suppressant (colour suggestion); the other half received no suggestion.

448 females aged between 18 and 35 years participated in the two experiments. Only females were tested because of reported sex differences concerning self-reports for appetite and food preferences. The majority were students.

For experiment one, 12 pictures of sweet food (like chocolate chips) were chosen, as a result of its average neutral to positive rating for food wanting. For every one

of the 12 original footage, 3 extra versions with the food items coloured in blue, red, and black-and-white (colourless) were created, resulting in a total of 48 food images. In experiment 2, the same 12 food images were used as in experiment 1 (in original colour). Four different versions were created with a white, red, blue, and Grey (black-and-white) background. In each experiment, the same red and blue colouring was used.

Images (the photographs) were displayed in randomised order and the participants rated their food-wanting (“How much would you wish to eat this food right now?”) on a seven-point Likert scale (1 = not at all; 7 = very much) for every picture.

In the suggestion condition, the reduction within the propensity to eat blue and black-and-white food was bigger compared to red food. Blue and black-and-white food didn't dissent from one another. As an example, Kesari's propensity to eat decreases once we add the colour powder blue than red colour.

In no-suggestion condition, food wanting didn't dissent between food items with white backgrounds and food with coloured backgrounds.

It was shown that both blue and red colouring of the depicted food items had an appetite-reducing effect. Thus, ‘red’ and ‘blue’ didn't have the anticipated opposite effects on the propensity to eat, however, were considered negative. As an example, compared to the initial brown chocolate chip cookie, all colour variants (red, blue, black-and-white) were experienced as less mouth-watering. In the no-suggestion condition, the appetite-reducing result of ‘blue’ and ‘red’ didn't dissent from one another. This could be a doubtless result of ‘colour expectancy deviations’.

In the present investigation, the ‘blue effect’ on reported food wanting was increased by the verbal suggestion of this colour as an appetite suppressant.

The red suggestion didn't affect food wanting because an appetite

increase was suggested, whereas the participants experienced a reduction. No influence of colour on food wanting was ascertained in experiment 2 although our large sample size was related to sufficient power to detect even small effects.

Different food items appear to be related to different appetizing contexts. Finally, this study identified conditions under which

colour suggestions will influence food wanting.

While the current study relied only on self-reports for the propensity to eat depicted food items, future research can find an optimal combination of food colouring and colour suggestion for specific food items and propensity to eat or whether food colouring can help in reducing food-wasting behaviour.

Condensed by :
Kanagaprabha R



Technology intervention in the 21st century extended the options available for consumers to purchase by providing both online and offline channels. In this omnichannel era, a consumer, with a smartphone in hand, can now compare the prices, check for the product reviews and they even have the preferences for the kind of products to be purchased online and the products to be purchased in-store. This combined use of online and offline channels resulted in Webrooming and Showrooming among omnichannel consumers.

Webrooming refers to searching for information online and then purchasing offline and showrooming refers to gathering data and examining products in

physical stores and then purchasing online. This can have both positive and negative outcomes for the retailers. On the one hand, it increases the free-riding behaviour among the consumers, but the omnichannel consumers are the most valuable segment for the multichannel retailers, as cross channel purchase positively affects the consumers' attitude and perception about the service quality if leveraged properly and creates favourable purchasing behaviours.

The authors in this study analysed the effect of Webrooming and Showrooming behaviour on the smart shopping perception. For the smart shopping

perception, a three-dimensional structure was used which includes:

1. Effort and time savings
2. Right purchase
3. Money savings.

The study employed an experimental design using real consumers who were asked to evaluate Webrooming vs Showrooming behaviours. Nine multichannel retailers in the selected categories provided the participants for the study from their customer databases. The study consisted of an experimental design with 2 (Webrooming vs. Showrooming) x 3 (shopping motivation: right purchase vs. time and effort savings vs. money savings) in a between-subjects factorial design. With 9 retailers, a total of $9 \times 2 \times 3 = 54$ vignettes (Hypothetical situations) was generated.

After carefully reading the vignettes, the participants judged how the protagonist would react to the shopping experience by answering 7 point Likert scales and they answered 3-dimensional Smart Shopping Perception Scale. They also assessed for smart shopping feelings.

The results showed that Webrooming produces a higher perception of time, effort-saving and the right purchase. However, the perception of money savings is similar for both Webrooming and Showrooming. The results also revealed that smart shopping feelings were higher for participants who read the Webrooming vignettes than for those who read the showrooming vignettes. In addition, Webrooming led consumers to attribute the purchase outcomes to themselves, which increased their smart shopping feelings.

As the smart shopping perception also results in utilitarian and hedonic experiences, understanding the consequences of Webrooming and Showrooming will help retailers to anticipate what consumers expect when undertaking these behaviours and to design effective customer experience and increase consumer satisfaction and experience by making them feel as “smart shoppers”.

Condensed by :
Ganga S



DIABULIMIA

Though uncommon in our country, Diabulimia is usually seen in those with type 1 diabetes. When people with diabetes restrict insulin and binges, they're diagnosed with a condition called diabulimia, an eating disorder - a portmanteau of diabetes and bulimia, which is also referred to as T1ED.

As insulin retainer, they often change their prescribed dose to lose weight. Although the prevalence rates of Diabulimia among Diabetic people are high, there is a lack of research in this area, creating a gap for effective treatment and coping among the affected people.

A study conducted by BBC in 2017 on "Diabulimia: The World's Most Dangerous Eating Disorder" reports the enormity of the disorder.

The exploratory study of Sophie Elizabeth Coleman and Noreen Caswell aimed to focus on the views and experiences of people with Diabulimia, which provide much-needed information to healthcare professionals for designing future treatment. A total of 45 individuals with type 1 diabetes mellitus and a history of insulin misuse were the participants of the study.

The research has a qualitative design, using the thematic analysis included the assessment of eating disorder psychopathology with the Eating Disorder Examination Questionnaire (EDE-Q). They completed the Eating Disorder Examination Questionnaire (EDE-Q) online and also answered 16

open-ended questions, which were then analysed using thematic analysis. A comprehensive coding procedure took place and codes were collated into themes. The average global EDE-Q factor of 3.96 (1.21) enlightens the alarming rate of an eating disorder. From the thematic analysis - reasons for insulin reduction, triggering factors, medical experiences and thoughts on recovery were identified.

The common themes pinpointed were concerns about weight, difficulty coping with diabetes, past trauma and the importance of relationships. Majority of the participants (78%) declared weight loss as the main reason they restricted taking insulin and some stated that the rate of diabetes and self-harm. Victims of all types of diabetes avoid being in it as they were tired of it or did not want to be different from others.

Diabulimia sufferers due to severe or life-threatening complications are subjected to medical or

psychological procedures. Many individuals have witnessed stressful incidents like harassment, assault, misconduct and detachment from their families. This intensified the need for a shift in the way professionals view Diabulimia and this highlights the importance of psychological intervention for Diabulimia, specifically intervention that targets trauma and beliefs about weight and appearance.

Thus this study suggests that adequate psychological treatment should be performed along with any diabetes tutoring. Current clinical practice guidelines for eating disorders recommend psychological treatment such as Cognitive Behavioural Therapy and Family-Based Therapy. This research throws light on the experiences and views of people with Diabulimia, which will help the professionals for effective treatment designs and further research.

Condensed by :
Janani G



TALKING THERAPY IN NATURAL OUTDOOR SPACES

Ecopsychology is a growing movement that seeks to study and further understand the relationship between humans and the natural world. Ecopsychology is a therapeutic technique and ideology that tries to treat people psychologically.

A central premise is that while the mind is shaped by the modern world, its underlying structure was created in a natural non-human environment.

The emotional connection is expanded and it also promotes sustainability between humans and nature. Detachment from nature is caused by industrialization and urbanization and it became the root cause of psychological

distress, with some going as far as labelling the condition 'Nature Deficit Disorder'. Time spent in natural outdoor spaces has physiological and psychological benefits, such as reduced stress responses and improved mood. Mental health practitioners have begun to harness nature's restorative capacity by challenging convention and taking talking therapies outdoors.

This therapy includes mutuality, freedom, holism, interconnectedness and practitioner well being. This study synthesizes the experiences of these practitioners and their clients.

To provide an integrative exploration of multiple therapy professions, a thematic exploration was used.

The research was done with 322 practitioners and 163 clients. The restorative effects of nature are explained by ecological system theory. The higher and lower level themes in a framework lead to mixed-method meta-synthesis.

Through assessment and formulation, the practical, therapeutic and organizational issues were mitigated. The question discussed mostly is “Whether therapy in natural spaces should become a more mainstream option for clients and practitioners?”.

Condensed by :
Aishvarya G



SOCIAL VALUE OF GREEN CONSUMPTION

Promoting consumers' purchase of green products is crucial to the construction of ecological civilization and sustainable development of the whole society.

Although the impact of social exclusion on consumer behaviour has received increasing attention, in recent studies very little is known about how social exclusion affects consumers' prosocial behaviour like green consumption.

Social exclusion refers to subjective feelings when one is rejected, or ignored by other individuals or groups in society. The need for social relations is one of the basic needs for the

human being, while social exclusion is a direct threat to it. Green consumption is an effective approach to mitigate the negative effect of human activities on the natural environment. It is the consumption of products, related to environmental conservation, i.e., organic products.

As for consumer behaviour, when suffering from social exclusion, consumers will perceive that their needs of belonging are threatened and then make more conformity consumption and have a stronger risk-seeking tendency in financial decision-making.

Since green consumption is in line with the long-term benefits of society, it is easier for consumers to be accepted by other people if they take this action. Moreover, these signals can also increase the likelihood of being accepted by other groups. Buying green products as prosocial behaviour has created a relationship between green consumption and social exclusion. In this research, the author conducted three studies.

In the first study, 65 participants were randomly assigned to two conditions - state of social exclusion: exclusion vs inclusion.

In the second study, 135 participants were randomly assigned to a set of two conditions: state of Social exclusion: exclusion vs. inclusion and Audience: public vs. private.

In the third study, 38 participants were randomly assigned to a set of two conditions: state of Social exclusion: exclusion vs. inclusion and Cause: stable vs. unstable.

The results from the study have shown that social exclusion has a significant positive impact on consumers' purchase intention of

green products than social inclusion (Study 1). In the context of private purchases (online shopping), social exclusion cannot promote consumers' willingness to buy green products like public purchase (shopping in malls). This is because, in the process of green products purchasing, signals must be sent out to the public successfully (impression management).

In the offline purchasing process, consumers' behaviour can be seen by or interacted with audiences, like communicating with sales staff and peers. This gives the sense of belonging and connection but in the context of online purchasing, sitting in front of a computer does not give them social interaction (Study 2).

Besides, the effect is only significant when the cause of social exclusion is unstable (Study 3). When consumers perceive that the cause for their exclusion is stable, they will give up sending out signals to others by consuming resources and they are not willing to buy green products because the status cannot be changed by their efforts. They know that they can't change their state and it's stable. But when consumers believe that the cause of exclusion is unstable, they can make

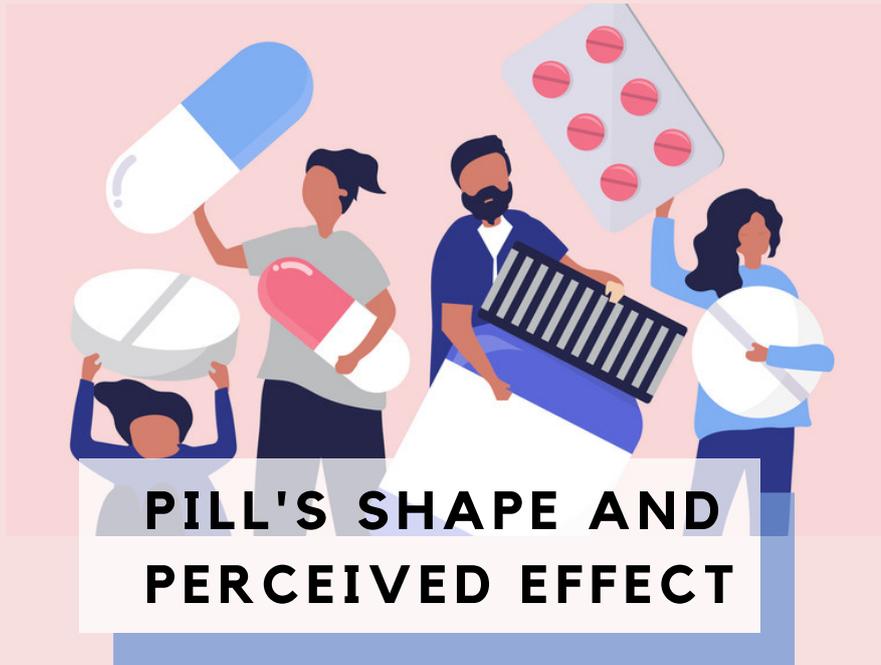
efforts to change the status quo and the purchase of green products is a good way of signal transmission. It is conducive to the psychological recovery of excluded consumers.

The conclusion of this study shows that to increase green marketing, marketers should highlight their social values in the design and publicity of green products such as using green products as the embodiment of their status. Specifically, among the measures adopted to motivate hotel guests to reuse towels, conveying information about other guests'

environmental conservation is more effective. Social orientation factors like reputation are also driving forces of people's participation in environmental conservation.

This study focused only on the relationship between consumer green consumption and social exclusion, but many other factors would lead people to indulge in green consumption. Most people buy green products out of environmental concern. Social need (social exclusion) is one of the many factors that encourage green consumption.

Condensed by :
Gayathri N



PILL'S SHAPE AND PERCEIVED EFFECT

The efficacy and the marketing of products not only depends on the quality itself. The size, shape, colour, taste, forms and other features play a significant role in effecting the individual's perception of the product which in turn will have an impact on the marketing of the product.

Pharmaceutical products are not an exception. Many types of research show that the shape and colour of the pills impact its effectiveness through the individual's perception. For example, colours of the pills like pink, orange, red are perceived to be stimulating while, green, blue and purple to be calming.

Regarding the shape, angular pills seem to be stimulating and

energizing while curvy pills seem to have calming effects like relaxation on the individual. These kinds of perceptions might lead to either overuse or underuse of the pills.

Thus, designing a pill requires more attention to its features. This article explores the research on the perceived effects, bodily sensations and emotions evoked by the different shape of the pills.

The research is done through three studies. In study 1, conducted online, the participants were shown nine curvy and nine angular abstract drawn pills and were asked to imagine swallowing the pills of a given shape. The bodily sensations based on the activation and deactivation were reported using

the body chart by the participants. The data from 147 participants were statistically analyzed and found that angular pills evoked more energizing bodily sensation as compared to curvature pills as they resulted in calming effects.

This activation due to angular pills was found to be high in the regions of the chest and head while the curvature pills seem to result in the deactivations all over the body except the top of the head.

Following the study 1, study 2 with 68 participants were conducted and 3-D printed mock-ups of angular and curvature pills were alternatively given to the participants. After the participants imagined consuming the pills by pretending to swallow, they were asked to report how they feel using a 7-point scale and administered with Identical Pictures Performance Test to assess the visual perception task involving visual scanning and comparing six black and white geometrical figures after each imagined swallowing of pills

The results regarding activation and deactivation effects due to angular and curvature pills in the previous study are supported by

The perceived effect of angular pills result in the increased performance in the Identical Picture Performance Test when compared with Curved pills which again confirms that the angular pills have an energizing effect while curved pills have a calming effect.

The bodily sensations of activation were reported in the areas of the chest might be because of the changes in breathing and heart rate. In the head, it might be the result of changes in physiological functions and cognitive functions and in limbs as the indication of readiness to perform actions while the deactivations were reported similar to that of Study-1 i.e., the whole body except the top of the head.

Study 3 was conducted online in two phases. In the first phase (Study 3a), 118 participants were shown the photographs of 5 real angular and 5 curved pills and asked to characterize them based on angular vs curvy and round-edged vs sharp-edged and also the effect of those pills as either calming or energizing through a 7-point scale.

Analyzing the responses again confirmed that the angular pills result in energizing effect.

In the second phase (Study 3b), 10 photographs of real pills were shown and were randomly assigned to 3 conditions where the benefits of the pills are suggested as energizing, in the another, the pills are suggested to be calming and in the other condition, they were neutral as none of the benefits were suggested.

The participants were asked to imagine taking those pills and to respond in a 7-point scale regarding evoked feelings, bodily sensations in the body schema and emotional associations were explored using wheel format and Geneva Emotional Regulation Test depicting 14 emotions.

The response from 418 participants was processed and the result again confirmed the study-1 and the study-2's results that the angular pills are perceived to be energizing while the curved pills are perceived to be calming. It is also found that the pills are perceived to be energizing when the suggested benefit is energizing and it is similar for calming effect too.

Thus, the perceived effect of the pills seems to be enhanced when the suggested benefit and the shape induced expectations are congruent. In case of emotions, the angular pills are found to be associated with positive emotions including surprise, interest as well as negative emotions like fear and anxiety while the curvy pills are associated with positive relief emotions.

The activations and deactivations in the body parts during study 3b seem to be lesser when compared to the study 2 and this might be because of the administration of 3D printed mock-up pills and the act of swallowing during Study 2. Thus, when the real pills are administered, the impact of the shape of the pills might be greater.

This research gave an improved and innovative framework to design the pills based on the purpose and expectations. The individual might have their own schema and ways to associate with the pill's shape based on previous experiences and may have personal preferences which can be overcome by 3D printed pills which serve as a breakthrough in the field of pharmaceuticals where the pills

can be designed on the based on various characteristics and personal preferences.

United States Food and Drug Administration has approved the first 3D printed tablet called Spritam which is an antiepileptic seizure in 2015.

These findings can be generalized to food industry as the shape impacts how the taste and the health benefits of the food are perceived.

These findings also tend to be a baseline for further researches as well as various developments in pharmaceuticals.

Condensed by :
Bragathi A



SOCIAL INFLUENCERS AND DIETARY BEHAVIOUR OF CHILDREN

Food marketing in the media has become one of the main causes of children's unhealthy dietary behaviours. In recent times, vlogs (video blogs) have become a popular platform for advertisers to target their audiences through social influencers.

Social influencers are those who have created a reputation for their knowledge and expertise on a specific topic. Influencer marketing technique involves the promotion and selling of certain products through social media influencers. The vlogs posted by the social influencers serve as an attractive platform for Food Industries.

On social platforms like YouTube, one can see a series of vlogs such

as 'what's inside my kitchen?' or 'my fridge tour' hosted by socially popular people/celebrities. Through these types of videos, unrealistic expectations are built among households/viewers about what could be preserved/stored in household fridges against vegetables, batter, fruits etc., that are stored. Now, the viewers are misled to fake reality. While traditional media is facing a lot of restrictions, the online video environment is relatively unregulated.

Social influencers hence can trigger powerful influences on young children by presenting highly attractive animated characters with whom children can build Para-Social relationships, or identify

themselves with. Watching these vlogs has become a huge part of children's consumption of daily media.

These children based vlogs have become an important way for the food industries to reach large audiences of children. In India, adolescents' diets appear to be characterized by over-consumption of overloaded energy, nutrient-lacking foods and sugar-sweetened beverages, as well as low consumption of fruits and vegetables since social influencers in food marketing predominantly promote drinks and foods that have high sugar, fat and salt contents. These poor dietary consumptions can have an eloquent impact on both instant and long-term health of adolescents.

Researchers have generally studied dose-response associations finding that the more children were exposed to various food marketing, the more they consumed the advertised products. Early-life experiences with various tastes and flavours have a role in promoting healthy eating in future life. The nature of a descriptive review makes it difficult to assimilate complex interactions when large sets of studies are involved.

It has been found in several studies that parental food habits and feeding generalship are the most presiding determinants of a child's eating behaviour and food choices.

Parents should reveal their children to a wide range of good food choices while acting as positive role models. Prevention programmes should be labelled to them, estimating socioeconomic aspects and education. The influence of peers in dietary habits of children and adolescents materialize through various processes, among which we highlight modelling attitudes and beliefs about food, pressure and normative behaviours. This influence is revealed in the acceptance, preferences, selection and consumption of foods.

It appears there are differences by gender and age group and the influence of peers seems to manifest itself differently on different foods. The potential of interventions to promote healthy eating habits in children and adolescents based on the larger group of peers seems not fully exploited.

Condensed by :
Shalini priya M



PHUBBING: SMARTPHONE-INDUCED SOCIAL EXCLUSION

The omnipresence of smartphones and a growing need for people to stay steadily connected has provoked significant changes in their lifestyle and human interaction. Phubbing is a smartphone-induced form of social exclusion where people would ignore one's companion(s) to pay attention to the phone / mobile device. It is often manifested as dismissive behaviour such as sudden and unexcused disruptions of ongoing conversations accompanied by averted gaze and body posture.

Neuro-imaging studies illustrate that the dorsal anterior cingulate cortex, a brain area linked to the experience of physiological pain, is activated both when being socially excluded and when merely

observing the social exclusion of another person.

It was also noted that women react more strongly to smartphone-induced social exclusion than men in terms of their perceived need-threat and pain.

A research study was conducted addressing the act of smartphone-induced social exclusion and investigating whether phubbing impacts its observers. Participants (N = 160) observed photos of dyadic interpersonal interactions in everyday contexts in a between-subjects experiment, which depicted one-sided, reciprocal or no phubbing.

Results revealed that those observers of phubbing had experienced a negative effect and stress. Observers also criticized individuals who used their smartphones in social interactions, specifically on their warmth and competence; observers perceived that the relationship quality mediated these effects between the observed persons. Affective and cognitive outcomes emerged independently of observers' gender. These findings are similar to the temporal need-threat model of ostracism (i.e., social exclusion)

which support the finding that phubbing is a smartphone induced social exclusion which has an adverse effect on social interaction.

This finding could necessitate/inspire interventions to foster more competent social smartphone use. It also encourages smartphone users to examine phubbing in others and to mindfully become aware of how such behaviours make them feel as the observers may be a simple and effective way to reduce socially disruptive smartphone use.

Condensed by:
Rajaswathy R

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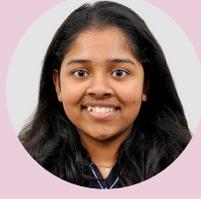
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