

THE CHANGE OF INTERFACES: THE PLAY OF ORGANIZATION & TECHNOLOGY ON HUMAN DEVELOPMENT (GEN Z)

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INTRODUCTION

Time waits for no one and one cannot predict what may happen and when. But one thing is constant-Change. However, no one can define the magnitude of change. Changing times have given rise to change in all aspects of life- trends, traditions, innovations, and whatnot. Change can often be a difficult challenge for everyone to accept and come out victorious. No matter how big or small, we all dread it as we step out of the comfort of the known into the uncertainties of the unknown.

Surprisingly, humans have embraced these changes with poise and have implemented them gracefully while preserving those indispensable upon which improvements were made and have made the world as it is today. It reflects the basic human nature to attune to the changes in their environment. From the ancient Cave and Stone ages, we have transcended into heights of luxuries.

Our achievements of today were once only far-fetched dreams of yesterday. The past couple of decades has marked certain revolutionary discoveries that have contributed immensely to the evolution of mankind. This brought under a microscope

would reveal the drastic changes in the dimensions of a man's life, and has forever changed the landscape of each generation, with newer innovations.

Technology is becoming the most pronouncing word all over the world. It has impacted the various facets of human life- industries, health care, education, monetary regulations, and administration. This could also be attributed to the advantages technology promises: immaculate accuracy, memory maestro, and economy, among others. A fundamental function of humans to communicate, has also been impacted by technology. Social media, messaging applications, and broadcasting systems have enabled us to be in touch with each other and the technical world in which we thrive.

However people may be open to changes, the time in which they were born, their pasts, societal situation and political system, cultural ethics, upbringing and all factors responsible for making the person who they are today, gives them an eccentricity in their approach to the change. Generational differences exist as each generation has its own set of characteristics that define them. One such characteristic identified in today's world is the use of various technological platforms and

how it is included in their everyday life, with technology rapidly innovating at a breakneck speed.

A generation, as said by Parry & Urwin (2011), is defined by sets of events which are of historic importance or other phenomena that is attributed to the people of that era that distinguishes them from other generations. Gen-Z (1995-2015) is the generation that has been born in an environment which is completely different from the environment to which the prior generations have been exposed to. The youngest ones of this generation may not remember any other world at all. Their media consumption habits differ from the other generations and are well-versed in technology. They have grown up in the current environment of ubiquitous mobile communications.

Social media has taken up the responsibility of bringing up the children of Gen-Z, or most likely we have let it do so. It practises to help and lend its expertise, but also puts an impeccable amount of pressure on the children. They have boundless means of learning and are independent learners. They are masters of multitasking as they can watch TV, text messages and check a computer screen all at once. They value financial independence as they were born or raised during an economic crisis. They know they have to earn their living by their own merits and have entrepreneurial ambitions and therefore develop themselves as they are also aware that their population is over two billion and resources are equally available for all. They don't settle for anything less than perfection.

The changes in the environment-amendments of sections 497 (adultery) and 377(LGBT); increased feminism (empowerment of women and their rights); increased rapes; urbanization; global warming; change in work pattern of elders; suicides; pressures of education system and of the future may or may not affect the development of children growing in this era.

But one thing is for certain, resources are made easily available compared to the other generations. All this and many other aspects of the growing economy have an impact on the mental growth of the children. It has made them highly achievement-oriented, enthusiastic, expressive, enlightened, charismatic, and dedicated.

This has affected them mentally and physically thereby their optimal level of functioning. However, we can look at the overall repercussions of technology and other changes on the mental and emotional aspects of the people going through this generation.

An emotion is considered to be a complex psychological state. This state is said to include three unique elements: a biological reaction, an emotional response, and an individualistic perception of a situation.

The play of emotions and feelings are pivotal in our life- it could also be said that most of our actions are driven by our emotions. Through these actions, we seem to find our existence and allow ourselves achieve the fullness of our personality. It includes positive and negative emotions which could contribute to eustress and distress respectively.

Emotion is often intertwined with temperament, personality, disposition, motivation, and cognition. Emotions act as a link between external events and behavioural responses. They serve to promote learning information that will help us make appropriate responses in the future and regulate social interaction. It functions as a crucial role in influencing behaviour which in-turn has a pendulum effect on mood, temperament, personality, disposition and all other cognitive processes of the brain.

Let's investigate the first aspect of change-

It isn't surprising to say that technology has indeed changed the mentality of people today. The parents of this generation (Gen-X) [because human emotional developments are hugely based on early experiences that one perceives in childhood, and that a child's parents are the first interactional environment] also seem to be affected by the technological shift in their workplace.

Parenting styles design the mind-set a child develops as he/she grows into an adult, and thereby, frame their future success. Due to the increased adaptability of the times, people of the older generations seem to be more open-minded, and therefore also are more open-minded in their parenting compared to their parents (Baby Boomers and Silent Generations) who were more authoritarian in their parenting, i.e., the parents nowadays play a more of a drone role in their children's lives.

Compromise, equality and understanding are now paramount. Naturally, the children are exposed and let to explore the world through social media and most parents of this age think it is right as media and technology is the future and it would be better for the child if he/she is well-versed in it for his/her future and employability. Moreover, parents, these days encourage input about new issues through children.

Some parents may expect their child to grow in a certain way, i.e., they start raising a child they want, not the child they have. Some may lack trust in their children all thanks to technology which later develops into feelings of defiance and aggression as they grow into adults. Children may learn empathy, care for their parents, others and respect efforts. Some parents also use technology as a form of punishment and reinforcement for the child to learn.

Empty promises made to a child by the parent or when a parent reassures a child that they would be open to whatever the child has to say and contribute, but hypocritically flies into rage when the child actually does so (which may be also due to impatience sprouting from work pressure or stress), the child develops trust-issues. Some parents also use technology as a disciplinary action by withdrawing access to technology (or favourite games) or reward children by letting them play an extra hour or so.

Parents work hard to earn and secure and provide for the family and educational facilities of the child since

the cost of living has risen drastically from when they were small. Watching parents work hard such that they hardly have time for themselves does certainly take toll on the children of Gen-Z. Late night work shifts and increased demand of work (which too involves having to stare into a computer screen for hours together, sitting in the same place from the morning and rarely having any conversations to relieve the pressure) has led to a decline in the overall health of all in this era of digitalization.

The marvels of technology in the field of pregnancy and childbirth play a major role to the initial stages of Gen-Z. Miscarriages have reduced significantly over the past few decades. The child's genetic makeup can be manipulated to remove unwanted traits or genes which may lead to Tay Sachs and other disorders or diseases. Other considerations of the side effects are discussed.

Many of them may be subject to prenatal exposure of toxins, when the mother inhales polluted air or drinks adulterated liquids. The same is reiterated after birth when these children are breastfed, allowed to eat food, touch soil and objects that are contaminated. Toxins such as lead, manganese, cadmium, polyaromatic hydrocarbons, and organochlorine, when suspended in natural or man-made settings, are said to affect brain development and its psychological health.

Children living in rural agricultural areas are more vulnerable to exposed pesticides. It has been found that

heavy metal contaminants (mercury, lead, cadmium) and pesticides lead to hyperactivity behaviour, including ADHD (Attention-Deficit/Hyperactivity Disorder) [whose symptoms may also increase due to technological use which shows inattention and hyperactivity symptoms in children].

Smartphones nowadays emit EMF (Electro Magnetic Field) radiations that pose higher risks to human health, including cancer, infertility, sleep disorders, and developmental issues that also affect children. 'Blue Light' beneficial during daylight to boost attention, reactive time and moods is now denied to kids staying indoors in the shade. But these same light rays are detrimental during night time, a part of which is transmitted by smartphones. What's worse is that these rays are now artificial, is said to disrupt sleeping cycles through changes in hormonal production (circadian rhythm and melatonin secretion). Lack of sleep has now led to depression and obesity, which now, indirectly affects pregnancy.

In the built environment made by man, noise and traffic-related exposures might have detrimental consequences on brain health. When children are prenatally exposed to hydrocarbons (polyaromatic), their effects last through childhood. These hydrocarbons affect behavioural, cognitive, and emotional control-essential practices for social belonging.

Children have forgotten the practice of Rough-and-Tumble play. Playing has a whole new meaning now. It is now having eyes glued to electronic games

at home. Although they may act as escapes from the harsh reality which children are now exposed to, living in a virtual world is not all that favourable. It affects the child's attention span, feeling of responsibility and loss of their self-awareness. These games may be hypnotizing in nature like Blue Whale and Momo Challenge which may prove fatal, and damage the child's capacity for originality, rigorous and reflective thinking.

Constructive Play, Formal Play, Functional Play, and Pretend Play influence a child's development. These years of foundation, as they would determine the child's supposed role in the society of future, are constantly interrupted by technological distractions. Pretend play forges empathy as children play different real-life roles. Play school instils creativity and imagination, weaving carefully their future roles. Technology necessarily does not probe into these areas of brain functioning and hence, affects their solving capacities in real life situations.

Children are now less exposed to green areas due to urbanization and technology. This may affect the child's mental well-being. This is because the colour green calming, compassionate, exciting and optimistic. Moreover fresh air, meaning increased oxygen supply to the brain and the mixed greens which are said to stimulate the following emotions increase the supply of 'happy' endorphins like serotonin, dopamine (pleasure) and oxytocin. It also helps in treating ADHD, Dementia, Alzheimer's, stress, depression and other mental illnesses.

Regular exposed to high levels of noise interfere with speech development or reading difficulties in children. Prolonged exposure to loud noises and music on headphones can damage brain cells.

Children are constantly exposed to the world through a screen. Social media and messaging apps have granted access to the happenings of the world in a click or touch. The positivity of this is children are prepared to face the world at a younger age compared to the previous generations. Technology seeks to create a sound foundation for the years and experience to come.

One is seldom found to be with one's own feelings and thoughts- social media has their minds preoccupied with what isn't and what is. The beating heart of mindfulness is now filled with thought-processes of others. 'More reactive and less reflective' is an apt phrase to summarise the character of Gen Z. A state of self-alienation from themselves, deserted from their emotional sides on what makes them human, disabling self-awareness and self-reflection is what kids today face. Tech-dependence has made them emotionally unstable, especially when adolescents of Gen-Z go through the crisis of identifying their individuality.

Children are now less exposed to green areas due to urbanization and technology. This may affect the child's mental well-being. Being exposed to a green environment is said to keep a person at peace and happy. This is because the colour green calming, compassionate, exciting and optimistic.

Moreover, the brain is unable to produce new brain cells which would be possible due to the increased blood flow during exercises. The hippocampus is responsible for newer brain cells, which boost learning and memory. Exercise allows safe release of stress and other negative emotions. Achieving fitness goals and exercising are often outlets of thoughts of worries and self-doubt. "Self-Confidence is tied to how one feels about oneself". Lack of exercising tends to lead to obesity and develop a poor self-image, leading to anorexia, bulimia and depression.

Loneliness, depression and other mental issues have increased in this century leading to damage to others and self. The main reason for such issues is because of people forgetting about their 'sense of self' (the mental art created after careful description and evaluation of oneself), thereby reducing their 'self-efficacy' (understanding of abilities and capacity for situational solving and problem approach). **It is rightfully said that "Gen-Z is the most socially aware generation but is ironically the least self-aware generation."**

The changes in the workplace due to technology have also affected the mental and physical health of the parents. This has, in turn, affected their offspring (Gen-Z). Long gone are those times when women traditionally stayed at home and looked after the children. Children are put in day-cares or with a physical 'stay-at-home' nanny in their most delicate stages of development. The demanding nature of parents' work, late-night shifts, family pressures, future pressures,

etc., may affect the child's emotional development as their psychosocial needs may or may not be completely satisfied. Children often feel left out and decreased interaction with parents influence the emotional growth of children.

Unhealthy eating habits (fast food) affect mental health (especially the hippocampus) as the body and the brain get insufficient nutrients which hinder the mental and physical natural growth of humans. It leads to obesity which in turn leads to depression, inattention, ADHD and learning difficulties. Sugary foods give 'sugar rush' which make children jittery and anxious.

Because of the **high population growth**, bright futures are awarded to the fittest and finest, making everyone work hard and fight hard for their position in society and earn their individualism. This causes turmoil in the health of this generation as it releases certain neurotransmitters that promote wakefulness during the night. However, the effects of sleeplessness may be irritability, high emotional response, sensitivity to the environment, reduces attention thereby causing accidents, hinders alertness, reasoning, problem-solving and tiredness. Extended levels of sleeplessness may lead to sleep disorders (insomnia) and depression.

When it comes to games involving quizzes and other 'knowledgeable' games, most answers are repeated and the child learns the answers through memorizing it rather than

understanding it. The child lacks flexibility of thought. The person who invented Blue Whale justifies his actions that his intention was that of social cause. This social cause, as stated by him, explained his aim of ridding society of people he termed to be 'worthless'. This shows how vulnerable people have become, leading to the growth of such sociopaths and psychopaths.

If unsupervised, children may be exposed to explicit content which may hamper the child's natural course of mental development and may in dire cases lead to emotional imbalances, disorders, and death. Adult aggressive behaviour has often been linked to content that is violent, horrific, or highly sexualised. It could also lead to fear and unhealthy sexual practices. Academic and social-emotional learning behaviours are attested to educational or pro-social messages of content.

Lack of exercises can leave feelings of physical weakness and inability to efficiently fulfil work duties or take up new hobbies. Lack of external physical exposure leads to higher risks of dementia (memory loss) and depression (feeling of apathy and negativity) due to reduced levels of the endorphins which are necessary for normal brain development.

Social media apps (Facebook, Instagram, Snapchat, etc.) have been invented to keep people informed about the latest news and happenings in the world and bring intimacy among peers and sharing their good times. Sadly, bad things come along with

good things. This has created jealousy and a feeling of being 'left-out' or 'missing out'. When people, especially of Gen-Z, watch this, they tend to start comparing their lives to other's lives leading to insecurities and inferiority complexes.

The loneliness of Gen-Z is not just the immediate repercussion of increasing usage of media but lessening interactions with neighbours, school mates or just any physical human beings. "Google is the new grandparent, the new neighbour, the new nanny." The changing times have made people self-centered and at the same time self-unaware. Gen-Z children have mastered the art of living in extremes but have failed or are even unaware of the power and strength of an emotionally balanced life.

Stress is the new chic word in today's technologically advanced world which goes hand in hand with depression. This affects the Gen-Z kids, seeing their parents struggle and sometimes succumb to these pressures have added a sense of fear, lowliness, and loneliness in today's generation as they are made to face the hard reality at such a young age.

Sleep deprivation is common among all. Either due to technology or due to the mental problems, due to increased fear of the future and preparation of the same (competitive exams), people today tend to sleep less or omit sleep altogether. The Gen-Z are filled with ambitions and also understand the necessity to work hard in an environment where resources are equally available and everyone is

equally talented, but feel that there are not enough hours in a day to get it all done.

Children nowadays have weakened Self-Regulation. Tech dependence increases impulsivity as it promises immediate gratification of wants. Children have forgotten to regulate the self, resulting in an emotionally immature early childhood behaviours such as bullying, temper tantrums and anger outbursts. It leads to underdevelopment of social skills which breed isolation and reclusiveness. Children are mostly under the trance of technology, depriving them of situations where they could apply empathy (healthy compassion) or learn it. The motivation to reach a goal requires perseverance, drive, and undivided attention, all of which lack in today's children. As children become more independent, they grow discontented and irritable as they can't control the characters of the real world unlike the simulated one. Disappointed, they tend to suffer symptoms of anxiety and depression.

Technology has also lead to various **disorders** which are eminently related to the times of today. Intermittent Explosive Disorder, an impulse control disorder as people think they are vulnerable on the internet and have to protect themselves at any costs and are always used to having it their way; A person who has Low Frustration Tolerance (LFT) seeks immediate satisfaction or avoidance of suffering. It happens because the internet has taught us to be impatient; Munchausen Syndrome- attention seekers; Obsessive-Compulsive

Personality Disorder (OCPD) obsession on the world not being perfect; Self-Abasement/ Attention Seeking Behaviour- low self-esteem or for popularity; and Asperger's Syndrome, they cannot see nonverbal responses and facial expressions and thereby lack empathy. Various personality disorders are also seen to surface as anti-social behaviours are easily detected nowadays.

This has led to brooding as well and restricts the growth of the child's brain. When the physical body isn't exerted or exhausted, not only does it make your body more prone to diseases, it causes moodiness, irritability, unhealthy weight gain, and your brain fails to function and grow normally- the brain is unable to produce neurotransmitters (endorphins) like serotonin (memory, obsession, and compulsion), norepinephrine (energy, alertness, and concentration) and dopamine (reward, pleasure, and drive) which also lead to depression. When any of these endorphins fail they lead to anxiety, impulsive behaviour, irritability, loss of appetite, aggressive behaviour, low sex drive, lack of motivation and attention.

Some of the control measures need to focus on curbing the dependence on technology, and not technology itself. Technology is one of the most remarkable innovations of mankind and is quintessential for its existence. However, we must not let this rule our head and forget our individual survival instincts. A routine without technology is not possible, but a break from this customised routine is a must, to be with oneself is more than anything.

Cyber-bullying is the form of bullying children undergo today. Children and parents need to take initiatives to solve each other's problems and be more open. Parents should be able to create a positive environment for their children and take care and balance their life as health is always important and before wealth. Surely, all parents would want the best for their children but forget that children find happiness in their parents and are their mentors.

The positive applications of technology should be aimed at building and maintaining a healthy relationship with technology, to be at peace with each other. Technology has given 'apps' to satisfy the diverse needs of people (thanks to R&D). People must be made aware of these apps. Video-calling has facilitated therapy and helped people connect from people afar. Social media too has connected people like never and if used in the right sense can evade feelings of loneliness although they shouldn't be used as a primary source of socializing. People should get out more and talk often. People should overcome the generation gaps and discuss the pros and cons of a situation to develop problem-solving.

Academically, technology has already helped students and teachers in efficient learning. Though controversies of all kinds had hindered this implementation, educationists have developed a positive mind-set about the same. This has benefitted both parties of the learning process. Ultimately, the work place of this generation is also affected. It represents the dynamic ability of the environment and human mind. This

change is necessary as it is for the sake of all the surviving generations. However, it must be only to assist these processes. It is unimaginable to have only one medium as the mix of traditional teaching and technological aid has been made perfect. Further positive changes are always welcome which would maximise growth and expansion of mental processes.

On an environmental note, pollution should be reduced as it has hazardous implications on physical and mental health of beings. Being born in an emotionally poor environment, Gen-Z is already suffering from various health problems. To curb these effects and ensure a healthier generation, conservation of good resources and environmental conservation should be taken on a serious note. Healthier lifestyles should be implemented to get rid of evils within the body. Foods filled with nutrients provide the body with necessary items for development and promote normal growth. If not, at least cut on unhealthy food and behaviour to sustain what exists. Walking, meditation and yoga should be implemented to create mental peace and develop patience. Moreover fresh air, meaning increased oxygen supply to the brain and the mixed greens which are said to stimulate the following emotions increase the supply of 'happy' endorphins like serotonin, dopamine (pleasure) and oxytocin. It also helps in treating ADHD, Dementia, Alzheimer's, stress, depression and other mental illnesses.

On a personal note, people must be reminded that they are beautiful just the way they are and what they needn't

compare themselves with others as each one is beautiful in their way.

We must learn values of compassion, empathy, appreciation, and respect for each other and their efforts. They mustn't be forced or shouldn't force themselves into something. Children must be taught to deal with failures and learn to let go of things out of their control and things that they don't get and quit cribbing over issues that may be petty later in their lives. Values of hope and belief must be re-instigated and that the ability to frame the future is in their hands.

But most importantly, it depends on everyone's ability and thoughts to rectify his/her ways to feel ecstatic and not worry to ensure their own brighter future.

LITERATURE REVIEW

Rogeness and McClure (1996) explained the effects of interactions between the genetic/biological make-up of an individual and his/her surroundings. This relationship is said to be paramount to the individual's physical and psychological development. Some of the causes of these developments were revised: 1. Genetics, 2. Intra-uterine environment, 3. Parent, 4. Environment, and 5. Mental drawings of oneself and others. They discussed a study on rhesus monkeys, and how an emotional detachment from its parents and peers led to lesser production of dopamine and serotonin, which had "long-lasting effects, if not permanent". They upheld a hypothesis which stated that neurochemical functioning was influenced by early

experiences of an individual, which could have abiding effects on the same. These authors concluded on the note that since behavioural expressions are underlined by neurochemical events, it can also affect neurochemical systems such as dopaminergic, noradrenergic, monoamine, and serotonergic systems, which is associated with behavioural expression.

Baldwin (1998) had studied how technology continuously affects the worlds of academicians and its faculties. Learning that this technological impact is ambiguous, he explored how the influence of technology on the professional lives and careers of higher educational faculties. His study sought to study this delicate connection of academicians and technology through careful examination of the same. It investigated the special challenge of technology: Information overload. The amalgamation of technology and academic life poses some significant professional developmental challenges. He concluded the study on noting how digitalisation, by allowing flexibility has changed the scope of education into a wider one. However, to be skeptic is human nature, and that this has to be upheld for all further advancements that take place in this field. Practitioners of the academic profession must especially be skeptical in this world created by technology. But also, develop a sense of balance by approaching with optimism.

Moris and Venkatesh (2000) investigated, through the theory of Planned Behaviour Theory-Behavioural Attitude (A), Norms of Subjective Nature (SN) and Perceived

Behavioural Control (PBC), the adoption behaviour of technology among different age groups. Income, occupation, and education of the workers were controlled, which may otherwise confound the results. Their study facilitated an understanding of how adoption of technology is determined by the aging processes of individuals. The findings were that age has a more drastic change on the short term implementation of technology than long-term. The initial decisional attitudes of younger workers towards accepting new technology was found to be more positively notable as compared to older employees; reciprocally, norms formed by self (SN) and behavioural control that was perceived (PBC) was higher in the older workers than the youngers for a short period of time. For long-term usage decisions, the pattern of results for attitude toward using technology and perceived behavioural control was consistent with the initial adoption decision; however, there were no differences in subjective norm. Finally, they proved that age does moderate the effect of attitude towards behaviour, subjective norms, and perceived behavioural control.

Jackson and Kochtitzky (2001) explored on how to create healthier environments and how these would pendulum effect it had on public health. Health determined by external factors is known as Environmental health. This type of health also includes diseases or injuries caused by the said factors. Not only did they study the direct pathological effects of various biological, chemical, and physical agents, but also studied the effects on

health of the broad physical, social, and psychological environment. Their study stated various biological ailments cause by the amounts of pollution in today's world and its counter-effect on mental health. This study also represented various measures such as 'development of green spaces to improve mental health'.

Berson, Berson, and Ferron (2002) studied violent behaviours in US adolescent girls in an age that is considered to be a digital one. The baseline information for this study was collected through an online survey from active adolescent online girl users of the internet. This study intended to explore and build a foundation for future research on youth and cyberspace, and also frame future prevention and safety programs for the group. The survey was intended to assess online risks to adolescents that may be associated with engagement in threatening behaviour or exploitation. They found that when online, adolescent girls often indulge in very risky practices and often continue the same, offline as well. Their data also confirms that there is a lapse in preventative intervention to create and maintain awareness and safety for young people.

Okojie and Olinzock (2006) presented on the pivotal need for a positive mind-set while approaching the subject of technology in Classroom Instruction. Both the authors explained the intricacies of including technology in the field of education and how it should be made a part of the pedagogy. Teachers are responsible for the 'manufacture' of

technological resources for instruction, in collaboration with business enterprises. Their study explained that by developing a positive mind-set, teaching faculties would be assisted in achieving the spontaneity and the readiness necessary for technology integration, while overcoming computer intimidation.

Wolf and Flora (2010) studied how encounters with readily available greens which help in relieving the mind of fatigue and restore it to homeostasis. Man-made environments which were built include settings that act as a 'cognitive respite' through parks and green spaces. Greenery generally encourages social interaction. Through this calming setting, de-stressing and conversations exercise the brain, if not the body. When placed in work and study environments, these landscapes are considered a good investment. Visual access or just being in a green space helps to restore the attention function of the mind. It has also been noted to drastically improve performances. Their study concluded by stating that artificial greens do not exhibit the same benefits of natural greens and that the latter can reduce or help in treating mental disorders such as Attention Deficit Disorder (ADD), Alzheimer's, Dementia, and Depression.

Keeffee, Pearson, and the Council on Communications and Media (2011) had a clinical study on the multifarious effects of social media on the family as a unit. They particularly focused on the youngest members of the family-children and adolescents. This study defines social media as 'any

web site that allows social interaction'. It included new definitions such as 'Facebook Depression', 'Sexting' and 'Cyber bullying'. They described the benefits and risks of children and adolescents using social media. The study concluded on giving prior information to guardians and also advises them to practise healthy supervision of social media activity by younger members of the family.

Choudhury, Gamon, and Counts (2013) discussed methods of predicting depression through social media. This study represented ways how social media (Twitter) can be used to compile data to diagnose major depressive disorders. Through crowdsourcing using the Centre for Epidemiologic Studies Depression Scale (CES-D Scale) and introducing several measures such as 1. User Engagement and emotion, 2. Egocentric social graph, 3. Linguistic style, 4. Depressive language use, and 5. Mentions of anti-depressant medications). These were used to quantify an individual's social media behaviour. This was later used to predict the onset of depression in that individual. These behaviours are then compared with standard user class through these measures, and are then transferred to an MDD classifier which predicts the vulnerability of the participant to depression. These predictions claim to be 70% accurate. The paper concluded on a positive note stating that they would further like to investigate into ways of identifying the incidence and impact of trauma on individuals during crisis events, and for modelling of help-seeking behaviour, health risk behaviours, and risk of suicide.

Adam and Kisler (2013) studied how sleep quality mediates between technology-based sleep quality and the occurrence of mental disorders. The main study objectives of their work were to examine the relationship between technology and the characteristics of sleep such as quality and quantity along with depression/anxiety. The other was to measure the time awake due to technology use. Self-report questionnaires were collected from two hundred and thirty six college students. 47 percent of students reported waking in the night to answer text messages and 40 percent to attend mobile calls. After analysis, it was shown that sleep quality was affected to a poor state due to extended usage of technology after the individual commenced sleep. This in turn, caused anxiety and depression. The study drew the conclusion that those who find it difficult to set boundaries for technological use, especially college students, are at higher risks of psychological health concerns due to lack of rest or sleep.

Rosen et al (2013) studied a new range of disorders termed as iDisorders as they seemed to link to social media and other such networking sites. They systematically tested if only certain types of networking sites created anxieties or even developed certain attitudes such as multitasking. By predicting these attitudes, they could also foresee whether they conformed to the clinical symptoms of personality or mood disorders. To add, certain factors such as the demographic considerations were factored to ensure accurate results. An online survey

consisting of questions were given to one thousand, one hundred and forty three adolescents and young adults in which the identity of the participants was kept confidential. Each disorder had a unique set of predictors with 17 of the 22 significant predictors being Facebook general use, impression management and friendship. It was found that participants who had more number of friends on Facebook conformed to more clinical symptoms of bipolar disorders, narcissistic and histrionic personality disorders. It was also noted that these participants had fewer symptoms of dysthymia and schizoid personality disorder. The attitudes which were determined by technology (multitasking) also pointed out to clinical symptoms of such disorders. The selective use of technology brought out components of prediction such as image management and relationship formation for clinical symptoms. These conclusions drawn projected how technology could be good as well as bad and how they lead to certain attitudes that could be damaging.

Reamer (2013) studied the ethical and management challenges faced by social workers in an age of digitalisation. He explained that contemporary social workers are now offering their services to clients, which is made possible in this age of digitalisation. Services such as online counselling, telephone counselling, video counselling, cyber-therapy (avatar therapy), self-guided Web-based interventions, electronic social networks, e-mail, and text messages have helped these social workers and

their patients in the process. However, these introductions of e-social services have also introduced a range of problems with ethics and management of the profession. Some of these issues include questions regarding the competence of the practitioner, privacy of the client and confidentiality of test results, consent of the parties involved, differences in interests of the parties, limitations and dual relationships, and consultation process. In the end, the author identified relevant standards from the NASW Code of Ethics and other resources designed to guide the practice.

Cunningham et al (2014) studied the current scenario and the future of e-interventions for addictions and other mental health. The paper presented a short summary on recent researches on how some interventions online have contributed significantly in the field of addictions and mental health. Evidences support that e-human support has actually benefitted in treating anxiety and depression. The same could not be attributed to alcoholism. There has been evidence that online interventions can be as effective as face-to-face therapies, at least for anxiety disorders. The paper concluded on the note that further studies need to be conducted in this field, and this field must be considered carefully to ensure professional and safe delivery of interventions online in a technologically advanced environment.

Rosen, et al (2014) closely considered how specific technologies affected children, preteens, and teenagers. These changes were

measured on four basic areas of ill-being: 1. Physical/bodily symptoms, 2. Manifestation of psychological symptoms, 3. Problems relating to attention, and 4. Behaviours in class and home. The question of whether the state of ill-being is ascertained with other features of living such as exercise, eating habits, and other demographic details other than social media itself has been answered by previous models that form a path. This study established what is sought to do so; results significantly projected the independent effect of technology on health and the differences of this effect between age groups. Some thought remedial practices such as healthier snacks and exercises alone do not suffice to gain health. Parents must also be aware of the destructive side-effects of technology. Once this strength is gained, parents must devise strategies and allow moderate usage to reduce screen time.

Sladek and Grabinger (2014) identified the aspects of Gen Z as the first generation of the 21st Century. It differentiated Gen Z (realists, taught skills to succeed, and individualistic) from Gen Y (dreamers, given tools to succeed, and group oriented). It described the characteristics of Gen Z in detail; Gen Z being financially conscious, globally minded, lacking in work experience, and tech savvy. It discussed the importance of Gen Z in terms of employment and influence. This generation may be smaller compared to other generations, but the influence exceeds their size. The influential factors which make Gen Z what it is had been explored- The

Great Recession, which has made them socially aware; the economy, internet, and parents Newer norms leaving them to search for an identity, changing society making them health conscious, and that innovation and fast information have made them creative. It studied how technology has impacted on the learning attitudes of this generation. The paper concluded with methods to engage Gen Z and that adaptability is key in every generation-the way of adaptation is what determines a generation.

Mark, Wang, and Niiya (2014) studied how college students who multitasked had higher levels of stress through an observed study of their activities online. They sought to investigate the purpose of multitasking and its effects on mental health. Since multitasking is mostly done by college students, forty eight students were monitored for seven days using biosensors. These observations were done in their in-situ environment and all during their waking hours. A positive relationship was found between time spent on computers while multitasking to stress. Conversely, it was also found that Facebook and social media use alone did not necessarily stress out these students on a normal basis. More than just multi-tasking, the study further digs into habits that contribute to such behaviours. Night habits followed the previous day affects the multi-tasking routine of the following day. The side-effects of multi-tasking were also explored- heavy multi-tasking led to higher use of social media. This tires them mentally and therefore, report lower positive outlooks than those

who are light multi-taskers. Cross-studies revealed that colleges students multitask much more than information workers. This study was aimed at informing various designing frames for stress management which could be implemented by colleges.

Wiedmer (2015) in The Delta Kappa Gamma Bulletin, stressed the importance of learning the differences and challenges in working with a multi-generational workforce with each having their own sets of experiences and designations. This generational study included: Traditionalists (1920s-1940s), Baby Boomers (1940s-1960s), Gen X (1960s-1980s), Gen Y (1980s-1990s), and Gen Z (1990s-2010s). These differences must be looked into, as the paper did, to engage these workers in the environments, increase job satisfaction, create leaders, ensure continuous employability, and longevity of these features. The paper points out that “Zs (Gen Z) are very tech savvy and connect with global peers. They prefer interacting with media rather than passive TV or print texts and classroom lectures”. Flexible learning is enabled as they can learn whenever and wherever. Zers are generally considered to be directional as answers to any question are available 24/7, which makes them research on topics they really are passionate about. “Consistent multi-taskers, Zers look for constant feedback, clear goals, rewards, and personal challenges. Flexibility is important for Z’s as they expect quick results (promotions) and will keep their resumes handy” (Renfro, 2015).

Turner (2015) had examined the relationships that co-exist with Generation Z- technology and social media; values, forms and practices of social interests. The study revealed that this explosion of media has led to development of multitasking behaviours. This multitasking behaviour results in partially distributed attention known as Continuous Partial Attention. It explained how higher consumption volume of technology disrupts neurological development. To develop a better and healthier sense of self, the author gives out some pointers to clinicians, parents and teachers for engagement. It was concluded that “The explosion of technology is neither good nor bad; it is simply reality. When adults focus on the strengths of technology while also emphasizing continuing the traditions of personal connection, the results can only enhance the social interest for all.”

Mozalius, et al (2016) examined the practices of ‘Digital Natives’ in a digitalised environment, especially of the link between studying and gaming habits. In this study, data from thirty students pursuing a course for Game Construction at a Department of Computer Science on their gaming and studying habits from early pre-school childhood. Findings of the paper showed that gaming habits have often clashed with the individual’s study habits. In several cases parents had created gaming restrictions and there are examples of students’ self-restrictions, but there exist also examples of when excessive nightly gaming had interfered with the daily

school work. The paper concluded on a note for further exploration required in the field and also discussed an interesting idea to ponder on the other way around.

Shatto and Erwin (2016) studied Gen Z going into college and eventually landing a job by the next decade. Some of them may eventually settle down and begin a family of their own-giving birth to another new generation. This paper discussed the characteristics of Gen Z in terms of familial and multiracial exposure leading to cultural openness. Access to data even on the tiniest gadget makes this generation a truly unique one. The paper followed up on certain recommendations on faculty-student interactions in classrooms, deviations from stereotypical classrooms, and incorporating social media in education. The conclusions drawn by the paper reflected on the special learning patterns and preferences as Gen Z are “Self-directed learners who thrive on technology”.

Hayes, Maughan, and Peterkin (2016) explained Digital Mental Health Promotion through stigma reduction, looking into factors that determine lifestyle, socialisation and increasing awareness on mental health. The paper addresses potential harms of internet use such as certain ‘real world’ risk factors that could potentially worsen mental health. It also points out some some putative benefits of internet use. The paper concluded on a progressive note stating the implications of technology for future research and practice, and how digital technologies have radically reshaped daily lives for the better.

Singh and Dangmei (2016) explained the definition, characteristics, the preferences and differences of attitudes of Gen Z in the workplaces, compared to the other generations. "Generation Z is born and raised with the social web, they are digital centric and technology is their identity." The paper examined defining features and preferences of Gen-Z from prevalent researches. This was done solely to predict a suitable work atmosphere for organisations to adopt, to ensure performances.

Weinswig (2016) had identified three defining attributes of Gen Zers which is to place great emphasis on individualistic appearance as they grew publically online. The second attributes that these Zers are pressured for leisure services, popularly known as the 'Instagram Effect'. The third point stated that Gen Z is the most demanding and least patient generation ever seen, due to the presence of on-demand applications. The paper introduced Gen-Z, defined them and the irony of being the generation recording the highest population count but still, marked feelings of loneliness. The paper offered key takeaways for the previous generations to ensure smoother transition.

Lee, Son, and Kim (2016) studied the users of an eternally connected, communicative environment by means of various Social Networking Sites (SNSs). It reflects the urgent need to acknowledge the nature of social demands from these SNSs. Children these days to meet these social demands, tend to tire out (known as SNS fatigue), and also lead to physical strains from lack of

exercises while meeting these needs. They used the Transactional Theory of Stress and Coping as the overarching theory. Overload was considered to be the main determinant of SNS fatigue/strain, as this overload might be a stressor. In this study, they identified three types of overloads- 1. Electronic-information overload (e-information), 2. Communication Overload, and 3. System Feature Overload. It also includes SNS characteristics as the antecedents of overload. Two hundred and one individuals were asked to fill in online and offline surveys. The results of this study showed that all of these overloads were present and also acted as significant stressors for SNS fatigue. The predicting factors of overload, were influenced by the features of the SNSs systems, while information equivocality positively influences information overload. Conversely, the relevance of information and information equivocality did not necessarily predict communication overload.

Woods and Scott (2016) studied the influential relationship between sleep and social media usage. This study considered four hundred and sixty seven adolescents by measuring certain features of this usage such as night-time specific social media uses, self-esteem, and emotional investments in the same. The paper discussed how adolescents who used social media more – both overall and at night – also those who were more emotionally invested in social media experienced poorer sleep quality, lower self-esteem and higher levels of anxiety and depression. By considering only the

time and usage of social media (other variables curbed such as self-esteem, anxiety/depression dimensions), it was found that usage of media in the night predicted dips in the quality of sleep. This study and its revelations have immensely contributed to the dynamic evidences that support and study social media and its effects on well-being of adolescents. In conclusion, the results provide a ground for further studies on night-time usage of and emotional investment in social media, and its effects on adolescent well-being.

Fullagar, Rich, and Webb (2017) examined how latest pedagogic modes of addressing people have arisen through digital platform and sites. These 'new' ways have invited 'newer' ways of knowing distress embodied as 'mental illnesses'. The paper presented about affective arrangements caused by these evolving forms of formal and informal sites for the general public. These pedagogical sites perform an educational function of providing information about the importance and basic diagnosis of ill-health, especially of the youth. The paper concluded on the dynamic nature of researches being done in this field and about the nature of the digital age.

Primack, et al (2017) observed one thousand seven hundred and eighty seven aged nineteen to thirty two US young adults. This observation was to study independent role of social media and the different dimensional effects on mental health. The dependent variables of this study were anxiety and depression. These variables were measured by an information system (PROMIS). Social media usage of these

young individuals was assessed using an adapted per Internet research scale. From this, regressive models with logistics were designed and associations were derived. Associations such as using particular platforms and mental health outcomes of this activity were derived. The results concluded that use of multiple social media platforms is strongly and independently associated with symptoms of anxiety and depression, even when the overall Social Media Use (SMU) is controlled, and future research should determine directionality and reasons for these associations.

Hunt, et al (2018) conducted an experiment-cum-study to investigate the causal role that social media itself plays in the relationship between using social media and well-being. Ample research and studies have linked this usage to worse well-being. Hundred and forty three undergraduate students were asked to cut down their time spent on Social Media Sites (SMSs) to ten minutes every day for three weeks. A control group was set up and allowed to use their SMSs usually for three weeks. The results showed that the experimental group showed significant reductions in loneliness and depression when compared to the control group. However, when consciously known to be monitored, both groups showed significant decrease in anxiety and fear of missing out (FOMO) over baseline, suggesting a benefit of increased self-monitoring. The paper suggested limiting use of social media to approximately 30 minutes per day as this could lead to significant improvement in well-being.

Singh (2018) explained excessive gaming on digital platforms grows to a leading mental disorder. It termed this behaviour as a form of Obsessive Compulsive Disorder. The World Health Organisation (WHO) recently realised its hazardous effects on different aspects of life and has included it in the 11th edition of the International Classification of Diseases (ICD-11). The paper presented the idea of video gaming being equal to an impulse control disorder, diagnosis, its adverse effects and prevention and rehabilitation of the same. It also showed how this disorder causes a chain reaction in other aspects of life such as social life, behavioural patterns, among others.

Dimock (2019) had differentiated Gen Z from other generations. He explained the historical significance and diversity of this generation from others and the influencing factors for so. "Technology, in particular, and the rapid evolution of how people communicate and interact, is another generation-shaping consideration." The paper concluded that generations are a look-through to understand societal changes, and are not merely a sign or label which simplifies generational gaps or differences. The paper closed on a positive note that this matter should be further probed in as this generation (Gen-Z) approaches adulthood this decade (2020-2030).

OBJECTIVES

- To discuss the advent of newer disorders and causal effects in Gen-Z with the emergence of technology and urbanisation.

- To discuss the impact of technology in different stages of Human Development- Prenatal, Infancy, Toddlerhood, Childhood, Adolescence, Adulthood and Parenthood.
- To briefly differentiate Gen-Z from other generations-factors, mental development, resources, etc.
- To bring into light the characteristics of Gen-Z.
- To suggest possible measures to overcome the wave of technology and ensure positive application of the same.

RESEARCH METHODOLOGY

The impact of technology on Gen Z is an interesting aspect to be looked into. A structured questionnaire with 26 questions used for the survey. The sample size of responses is 119 and it is to be assumed that they are the representative of the generation taken into study (Gen Z).

Likert scale is used for 25 questions in the questionnaire, with one which opts the respondent to choose his/her preferred social media sites.

DESCRIPTIVE ANALYSIS

From the study it is seen that 58.8% of the participants are female, and 41.2% of the total participants are male for the study. The majority of the participants were born in 1999 and 2000, ie, 19 participants. The second highest participation has been from respondents born in 1997, ie, 10 participants. The third highest participation has been from

participants born in 2001. The overall participatory years of birth range is from 1963 to 2009. The pie chart in Figure 2 denotes that the highest participation for the study has been from academicians 60.5% or 72 participants, and students, ie, 25.1% or 30 participants. According to Collins, academics is used to describe things that relate to work done in schools, colleges, and universities, especially work which involves studying and reasoning, rather than practical and technical skills. As a countable noun, an academic is defined as a member of a university or college who teaches or does research. The third highest participation is recorded by IT Sector, ie, 4.2% or 5 individuals. This question could partially determine the exposure of technology per participant.

Majority of the participants were graduates, ie, 59.4% or 60 individuals. The second highest participation was recorded from the PhD sector, ie, 10.9% or 11 individuals. The third highest participation was from individuals of post-graduation, ie, 8.9% or 9 participants. Majority of the respondents are full-time workers, ie, 59.6% or 28 individuals. 40.4% or 19 respondents are part-time workers. Though an optional question, this could determine the financial status and independence of an individual. It could also determine the amount of time the individual has for leisure. Also, majority of the participants were single, ie, 73.7% or 84 individuals. The second highest participation was marked by married individuals, 15.8% or 18 participants. 9.6% or 11 participants were committed, and

0.9% or 1 individual disclosed to be separated. This optional question was to partially understand the emotional belonging of the individual.

As per the questionnaire, questions have been based on the Likert Scale, ie, where participants are to express their agreeableness and disagreeableness to a statement.

For the first statement according to Figure 7.1, 24.4% (29 participants) and 50.4% (60 participants) strongly agree and agree respectively to the statement of whether they stay online longer than they usually intend to. This could indicate subtle signs of internet addiction, which is a characteristic of the latest technological advancements. 10.9% (13 participants) have chosen 'Undecided'. This could be due to multiple reasons-some being, i) Not understanding the statement ii) Not sure of whether they stay online for longer times, or iii) Not sure of the standards which define the behaviour. 10.1% (12 participants) and 4.2% (5 participants) strongly disagree and disagree respectively to the statement. This could suggest stronger self-control or more physically interactive individuals.

According to Figure 7.2 for the second statement, WhatsApp records the highest users (93.3% or 111 participants). WhatsApp allows its users to send text messages, voice messages, make video and voice calls, share images, documents, user locations and other media. This could be because many individuals use the app for personal as well as business. It could be assumed that the app simplifies the

process of communication. The least used site is recorded by Quora. Quora is an international question-and-answer website where questions are asked, answered, followed, and edited by Internet users, either factually or in the form of opinions. This could be attributed to the content representation of the website.

According to Figure 7.3 for the third statement, 7.6% (9 individuals) and 25.2% (30 individuals) strongly agree and agree respectively to the statement of whether they neglect household chores to spend more time online. This could slightly indicate signs of addiction and disconnect from the outer world. 10.1% (12 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 42% (50 individuals) and 15.1% (18 individuals) disagree and strongly disagree to the statement.

The fourth statement measures relationship formations of individuals in this era. According to Figure 7.4, 7.6% (9 individuals) and 21.8% (26 individuals) strongly agree and agree to the statement. Previous research has shown that shy or socially inhibit individuals who fear to speak up due to rejection or criticism mostly resort to making friends online. This could also lead to dangerous paths as one does not have information that could be apparent when meeting in-person. 16.8% (20 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour.

28.6% (34 individuals) and 25.2% (30 individuals) disagree and strongly disagree to the statement.

The fifth statement shows how the people around the individuals react to their internet use. According to Figure 7.5, 15.1% (18 individuals) and 31.9% (38 individuals) strongly agree and agree respectively to the statement, which means people around these individuals feel an emotional disconnect with the person. 16.8% (20 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 24.4% (29 individuals) and 11.8% (14 individuals) disagree and strongly disagree respectively with the statement, which could mean that these participants have limited time for their internet use so that their routines are not disrupted.

The sixth statement questions the balance an individual has between his/her internet life and professional/academic life. According to Figure 7.6, 10.9% (13 individuals) and 30.3% (36 individuals) strongly agree and agree respectively that they find it difficult to manage both. 8.4% (10 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 34.5% (41 individuals) and 16% (19 individuals) disagree and strongly disagree respectively to the statement. These individuals exhibit signs or are in the process of self-actualisation.

The seventh statement investigates the emotions of the individual regarding human interactions. According to

Figure 7.7, 9.2% (11 individuals) and 12.6% (15 individuals) strongly agree and agree respectively as they prefer the virtual world over the real world. Virtual world includes simulation environments created by games and social media 'pictures' of people. It reveals that people now prefer seemingly perfect object than imperfect humans, and it is more convenient for people to 'hide' behind images. . 17.6% (21 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 35.3% (42 individuals) and 25.2% (30 individuals) disagree and strongly disagree with the statement.

The eight statement measures the level of connectedness an individual seeks to have with his/her world. According to Figure 7.8, 26.9% (32 participants) and 27.7% (33 participants) strongly agree and agree with the statement. This subtlety indicates dis-associative behaviours and also an 'escape' from what reality provides, which could be hazardous later in life. 12.6% (15 participants) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 21.8% (26 participants) and 10.9% (13 participants) strongly disagree and disagree respectively to the statement.

The ninth statement investigates the individual's perceptions and feels about oneself. According to Figure 7.9, 13.4% (16 individuals) and 36.1% (43 individuals) strongly agree and agree respectively that they do compare

themselves to others on social media. It could be attributed to lower self-esteem and poor self-image, which are obviously not good signs for healthy development. 11.6% (14 participants) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 22.7% (27 individuals) and 16% (19 individuals) disagree and strongly disagree respectively to the statement, which could imply that these individuals have higher perceptions of self and higher self-esteem.

The tenth statement measures the level of addiction of individuals to social media. According to Figure 7.10, 26.1% (31 individuals) and 38.7% (46 individuals) strongly agree and agree respectively to the statement. These higher responses to this statement indicate beginning stages of addiction. 3.4% (4 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 21.8% (26 individuals) and 10.1% (12 individuals) disagree and strongly disagree to the statement.

The eleventh statement looks into the resources available to the members of Gen Z. According to Figure 7.11, 47.1% (56 individuals) and 34.5% (41 individuals) strongly agree and agree respectively to the statement. This shows how humans have changed their modes of references. The internet is a boon as it offers limitless information on any topic given/ 7.6% (9 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or

unclear understanding of the standards that define the behaviour. 10.1% (12 individuals) and 0.8% (1 individual) disagree and strongly disagree to the statement. This shows that the process of information gathering varies from person to person.

The twelfth statement reflects the behavioural changes in terms of medical conditions. Before, people used to depend on traditional home-made remedies for treatment or would directly consult a doctor directly, sometimes after discussing with neighbours, friends, relatives, etc. According to Figure 7.12, 14.3% (17 individuals) and 46.2% (55 individuals) strongly agree and agree respectively to the statement that they refer the internet before visiting a doctor. This shows that the internet is now the latest neighbour, friend, advisor, etc of people. 6.7% (8 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 21% (25 individuals) and 11.8% (14 individuals) disagree and strongly disagree to the statement. It could be because they understand that whatever is placed on the internet is not trustworthy, just like rumours which existed then. Also, it could be because the individual understands the seriousness of a medical condition and would, therefore, avoid wrong self-diagnosis.

The thirteenth statement measures the influence of technology in the secondary environment of the individual, ie, academic institution/ places of work. According to Figure

7.13, 53.8% (64 individuals) and 39.5% (47 individuals) strongly agree and agree to the statement. Characteristic to this generation, people have now implemented technology for ease and productivity in their everyday life. Learning seems to be made easier by technology. 4.2% (5 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 2.5% (3 individuals) and 0% (0 individuals) disagree and strongly disagree respectively with the statement, which could mean that some jobs/ learning processes do not necessarily depend on technology to get the work done.

The fourteenth statement investigates the quantity of time spent by individuals both in online and offline conversations for relationship-building. According to Figure 7.14, 4.2% (5 Individuals) and 26.9% (32 Individuals) strongly agree and agree respectively to the statement. This means that the individuals taken into this category feel that they spend equal amounts of time in conversing both offline and online. This could be a good thing or a bad thing: It is good that the individual maintains a balance between both, and sometimes it could be a let-down when situations demand greater offline conversations. 9.2% (11 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 42.9% (51 individuals) and 16.8% (20 individuals) disagree and strongly disagree respectively to the statement.

Although the question does not explicitly mention how much time, it could be assumed that i) The individual could either spend more or less time in online interactions than offline ones, ii) The individual could spend less or more time in offline conversations than online.

The fifteenth statement acts as one of the criterion which could help determine feelings of self-esteem and self-image. According to Figure 7.15, 10.9% (13 individuals) and 44.5% (53 individuals) strongly agree and agree to the statement that they feel their social feed isn't as attractive as their peers. This self-induced comparison and feelings of inferiority are unhealthy for self-development. 19.3% (23 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 19.3% (23 individuals) and 5.9% (7 individuals) disagree and strongly disagree to the statement.

The sixteenth statement asks the individual if they feel compelled to post something on social media. This is to investigate feelings of self-pressure for social acceptance. According to Figure 7.16, 8.4% (10 individuals) and 30.3% (36 individuals) strongly agree and agree respectively to the statement. This is not a good sign, as this could further develop into feelings of being left out, and depression. 11.8% (14 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 31.1% (37 individuals) and 18.5%

(22 individuals) disagree and strongly disagree to the statement.

The seventeenth statement determines the priority of the individual taken into consideration. According to Figure 7.17, 3.4% (4 individuals) and 16% (19 individuals) strongly agree and agree to the fact in the statement that their use of social media determines the time they spend with their loved ones. It could be attributed to higher levels of addiction, where the individual places higher importance on social media than relationships. 12.6% (15 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 44.5% (53 individuals) and 23.5% (28 individuals) disagree and strongly disagree to the statement, which implies that these individuals place higher importance on valuing personal relationships, which differs from person to person.

The eighteenth statement considers how individuals of this generation prefer to find and build romantic relationships. According to Figure 7.18, 11.8% (14 individuals) and 23.5% (28 individuals) strongly agree and agree that they prefer online methods over offline. This implies that individuals now like impressions formed on sites by the person themselves. Tension builds on creating the perfect bio, perfect 'display picture', etc to put their best foot forward. It could also imply that people now choose to hide behind their feeds. 22.7% (27 individuals) chose the option of 'Undecided'. This could be due to lack of understanding

or unclear understanding of the standards that define the behaviour. 20.2% (24 individuals) and 21.8% (26 individuals) disagree and strongly disagree to the statement.

The nineteenth statement studies the e-behaviour of the individual. According to Figure 7.19, 12.6% (15 individuals) and 35.3% (42 individuals) strongly agree and agree respectively that they do stalk or shadow other on social media. To stalk is “a stealthy pursuit of someone or something” and shadow is to “follow and observe (someone) closely and secretly”. And extreme behaviour that stems from such actions is ‘cyber-stalking’, which is “the repeated use of electronic communications to harass or frighten someone”. It occurs when looking at other people online becomes a problem. 12.6% (15 individuals) and 35.3% (42 individuals) strongly agree and agree respectively to stalking other online. 10.9% (13 individuals) chose the option of ‘Undecided’. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 26.1% (31 individuals) and 15.1% (18 individuals) disagree and strongly disagree respectively to the statement.

The twentieth statement studies the physiological effects of using social media for an extended time. According to Figure 7.20, 16.8% (20 individuals) and 32.8% (39 individuals) strongly agree and agree respectively to the fact that they experience severe headaches from long use. Research states that longer screen-time often causes eye-strain and eye-dryness which could trigger a headache. Headaches can

also be caused by stress, lack of sleep, an incorrect eyeglass prescription. 9.2% (11 individuals) chose the option of ‘Undecided’. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 27.7% (33 individuals) and 13.4% (16 individuals) disagree and strongly disagree respectively to the statement.

The twenty first statement examines the psychological well-being of the individual. According to Figure 7.21, 18.5% (22 individuals) and 45.4% (54 individuals) strongly agree and agree to the statement that they do have mood swings. Mood swings are normal, unless they develop into a much severe form which hinders everyday functioning. A part of this could be attributed to technology and the whole race of being interesting and successful. Anxieties and depressions have kicked in now to be perfect. 15.1% (18 individuals) chose the option of ‘Undecided’. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 18.5% (22 individuals) and 2.5% (3 individuals) disagree and strongly disagree respectively to the statement.

The twenty second statement studies the general behaviour of individuals. According to Figure 7.22, 37.8% (45 individuals) and 45.4% (54 individuals) strongly agree and agree respectively to the statement that they do multitask while using social media. Multi-tasking is one such behaviour which is learnt by the members of Gen Z. It involves dividing attention in two or more tasks currently in hand. However, research suggests that

attention does not divide but merely shifts from one task to another. Such practices often cause more errors due to insufficient attention, causing headaches. 5.9% (7 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 8.4% (10 individuals) and 2.5% (3 individuals) disagree and strongly disagree respectively to the statement, which could lead to higher and healthier levels of attention.

The twenty third statement records the role an individual plays in the familial structure. As discussed in the paper, Gen Z is characterised by more open parents who encourage input from their wards as well. According to Figure 7.23, 33.6% (40 individuals) and 46.2% (55 individuals) strongly agree and agree respectively to the fact that they do have decisive roles or advisory roles in their families. 14.3% (17 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 5% (6 individuals) and 0.8% (1 individual) disagree and strongly disagree respectively to the statement.

The twenty fourth statement seeks to understand how individuals interact with the society, especially their elders. Technology has now become a time of bonding, which was usually done by telling stories or sharing wisdom. According to Figure 7.24, 51.3% (61 individuals) and 42% (50 individuals) strongly agree and agree respectively to the statement that they

help their elders in using technology, which is now a relatively new concept for the elders. This role-reversal of information flow is characteristic of Gen Z. 3.4% (3 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 2.5% (3 individuals) and 0.8% (1 individual) disagree and strongly disagree to the statement.

The twenty fifth statement revises the changes made in the conditioning of children. According to Figure 7.25, 15.1% (18 individuals) and 17.6% (21 individuals) strongly agree and agree respectively to the fact that their parents used or still use technology as a reward or punishment for their behaviours. This could lead to unhealthy developments and induce addictions or abusive behaviours. 28.6% (34 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 23.5% (28 individuals) and 15.1% (18 individuals) disagree and strongly disagree respectively to the statement.

The twenty sixth statement looks into the psychological well-being of the individuals. During these times of hi-tech, there are higher confessions where individuals feel lonelier than before, ironical to the connections people maintain on social media. This is because, oftentimes, people pull up a facade on social media for acceptance. According to Figure 7.26, 13.4% (16 individuals) and 27.7% (33 individuals) strongly agree and agree that they do

feel lonely. 18.5% (22 individuals) chose the option of 'Undecided'. This could be due to lack of understanding or unclear understanding of the standards that define the behaviour. 26.1% (31 individuals) and 14.3% (17 individuals) deny such feelings of loneliness.

DISCUSSION

This study sought to explain the human development of Gen-Z through varying stages of technology. The aim was to point out to the fact that for every change in any dimension, the other facets of life on Earth will be affected to an extent. Technological advancement, as mentioned in the paper, is what sets apart Generation Z. This advancement has affected all other aspects of life-social, professional, personal, mental, physical, among many others. This study on Gen-Z and the changes in the environment in which the said generation is exposed to, is to briefly summarise findings that have been done in this field. Also, this paper seeks to lay a foundation for further researched done on the said topic.

The research implication of this paper was to establish a strong theoretical base regarding the topic taken into consideration. By citing various literary works of authors regarding technology and Gen-Z, different perspectives such as academic life, habits, mental development, harmful toxic exposure during prenatal development, pollution, etc. have been summarised to give an overall view of the evolution of Gen-Z. However, this paper does not provide any actual or experimental evidences

Further this paper does not include all aspects of this study such as Socio-Economic Statuses (SEs), choices of careers, professionalism of Gen-Z and exceptional cases to the study of this paper.

These changes need not be malicious in nature; they could be in the best of intentions. The invention of technology and computers is considered to be a revolutionary movement. It was discovered for the convenience of mankind and also to make it a companion into the distant future of development. As population grows, ironically people create and need work to survive and develop sustainably. This is where machines have lent its hand for humans to cope up with these demanding tasks, and not idle around. The idea was to walk hand-in-hand with machines.

A part of technology- social media was to connect with people across the world whom one could not afford to travel across the world and meet on a regular basis. But this did not mean to completely cut off from the other physically. Video calls, voice messages, text messages were all invented to create feelings of belongingness and rapport, but the same have conversely led to higher cases of depression-mostly due to lack of love. Pondering upon this question and to come up with all causes of this could lead to subjective analyses with an innumerable number of outcomes for this. One aspect, as portrayed by this paper, is that humans are required for certain jobs which only they can do. Machines can only help but humans must make efforts to complete the assigned jobs.

Anxiety and stress are some of the chic words used nowadays. The need to be like someone else, and being compared profusely has also spiked the numbers of mental disorders. Through machines, we have learnt to slowly think like machines-to be objective and alike. The fear of being unique has slowly consumed the life of humans. Some in the fear of being judged so, take extraordinary efforts to stand out, in the process losing oneself. One does not realise that to be unique is to be in peace with oneself, and self-acceptance. This distorted self-concept has been rooted deeply in the earlier experiences of the self. Gen-Z has grown with technology, and not with their selves- no exploration or being in situations which helped them assess themselves. This is pitiful, as we have brought this upon ourselves. This must be given due importance to.

Now imagine Gen-Z brought up by parents who fight battles created by their illusionary self. Prenatally, various toxin and environmental changes significantly alter the neuro-chemical disposition of the neonate. Technology advancement may also include development of machinery, industries and output-which have forever modified the ecological balance. Increased pollution, contamination, altered products in the market, deforestation, more than needed structures, are some of the causes that have directly or indirectly affected each of us.

Children of this generation are mostly brought up by parents who barely manage themselves. Fighting between professional, personal and

familial successes; and failings in some way have contributed in some way to their emotional imbalances. Some may see themselves as constantly failing, comparing themselves to that 'oh-so-perfect' family picture shared by one of their social media friends. In severe cases, this may just push these individuals into an abyss of endless thoughts- some made sober only through alcohol, drugs and other forms of substance abuse. For what seems like eternity, Gen-Z are brought up in this environment of constant emotional disconnect.

Therefore, these children are now brought up at their mercy. Attention seekers, bullies, narcissists are what we have to put up with; others being subject to victimisation and depression-is what is putting off the balance. Though not done intentionally, this is what we're going through. "No one understands to listen, but to argue" is the common saying of this era. With information ready in a snap of the fingers, the people of this generation have truly forgotten the difference between information and knowledge. Everybody needs to be informed and no one wants to look dumb. But sometimes, being dumb makes it worth to learn something new, and the learning takes place in their perspective.

This study, therefore, concludes with certain measures which could bring about a balance in the society. Small efforts such as having a potted plant in your work space, or as much as complementing a child for a job well done- could go in a long way in benefiting their neurological development. Getting the right kind of

nutrition and attention can also deter various learning difficulties.

Further investigation could be done in the areas of geographical distribution of Gen-Z, the political and societal context which could enhance or mar the effects of this development, or the differences that exist in the development across cultures and societies based on economic holding and social stature-to name a few.

CONCLUSION

After studying the interactions of technology that takes place in every stage of human development, this paper concludes that a balance between human and technological interfaces. The research paper has aimed to somewhat probe into individual stage and how technology presents itself in each of this stage with its effects. Mental health and neurological processes are focused with the introduction of technology. This upbringing by an external factor is bound to create small variations in the behavioural and emotional culture of this generation.

This could also be attributed to the differences in parenting styles from previous generations, and could hint at the type of parents Gen-Z would develop into. This has constructive and destructive connotation, which depends upon the mind-set developed towards the implementation of technology. The preliminary focus of this paper was to address and inform the citizens of this digital era, and that the paper has partially succeeded, if not entirely, in doing so.

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