

The purpose of psychology is to give us a completely different idea of things we know best.

-Paul Valery



Editor's note

First defined by William James in 1890 as 'the science of mental life, both of its phenomena and their conditions,' psychology has evolved innumerable times over the years. Just like mankind, its development from the precipice of its conception to its advancement for the better, psychology has embarked on a long journey and that is exactly what we try to cover in this edition of Sense N' Science. From child psychology to the everburgeoning field of positive psychology and more, we have compiled one of our most dynamic and bewitching issues.

We are proud to present the 9th edition of Sense N' Science Magazine. We thank all the students and teachers who contributed to this edition.

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### Improving society by devilifying mental health issues

#### Rishika Raj IB 1 A

With the world facing a plethora of problems, society as a collective suffers from more angst than ever before. Apart from problems at a global scale such as an onslaught of war, famine and pestilence, supplemented by the inevitable demise of our ecosystem due to the climate crisis, the mental health of individuals has been severely impacted due to an increase in unrest in their own environment.

Though that begs the question, were people better off in terms of mental health earlier?

In the past decade, society has become more accepting towards people who have mental health issues allowing people to voice out their difficulties and ask for help more freely. This in turns educates the rest of the populace, making them aware and also providing them with the courage to ask for help. However, being better is a relative term. While people do have the courage to have to voice out their struggles, the taboo mentality behind mental issues is far from zero.

Earlier, people with anxiety or depression were considered to be mentally challenged causing many cases of mental problems to be falsely diagnosed as insanity and thus, institutionalized people who could have been cured with dedicated therapy.

We continue to advance due to our cooperation as a species. Hence, we must take an empathetic approach towards people with issues like depression or trauma by giving them a comfortable and safe environment to express their troubles by improving the quality of therapy. Active government involvement in mental-health programs not only improves a person's life but also allows society to be more aware by making the world more acceptable and understanding.

While all this sounds like the unattainable utopia, it is a very practical solution that has begun to be implemented in places around the world. Schools and offices have behavioral counselors or mental health professionals who help students and employees progress further by overcoming any challenges they have by keeping their meetings confidential and providing a sense of security. Educating people on various backgrounds and using surveys to analyze people's understanding regarding the topic would help decision-making bodies adopt a better approach to destigmatizing and thus reducing anxiety, depression and trauma.



# How accidents/ traumatic events can irreversibly change us as individuals

### Prisha Roy 8B

A stitch in time saves nine. Don't let mental well-being go unnoticed.

Every time an individual experiences something traumatizing, their psychology gets affected. They aren't the same people anymore.

They are two main reasons that cause psychological disorders:

- 1) Abuse (Physical/Verbal)
- 2) Accidents.

Abuse causes people to develop Post Traumatic Stress Disorder (PTSD) and trust issues. PTSD can trigger nightmares, intense distress, mood swings, insomnia and vivid flashbacks of the abuse. This condition completely changes the person's personality. They typically become more introverted and stop talking to people, slowly becoming depressed and lonely. Nightmares deprive people of sound sleep which results in constant body fatigue. Childhood abuse makes the part of the brain that controls emotions become less productive. Childhood abuse has also often led to social anxiety and the victims have trouble making friends. Abuse is extremely deadly and in some cases, people have gone insane.

Accidents are another issue that causes psychological disorders. Accidents in many cases have caused serious injuries, stopping people from working and achieving their goals. Not being able to achieve a lifelong goal because of an accident can make people feel depressed and worthless. This brings down their self-esteem and self-respect. Flashbacks of the incidents can scare people, and cause panic attacks and nausea. Accidents also develop phobias. For example; being scared of driving in a car or maybe just simply standing near a car. Phobias also cause anxiety.

Psychological disorders should not be mocked. Traumatic events are something that many people have gone through. These conditions should not be considered diseases and can be cured by simply talking it out with close friends, and parents or maybe even meeting a therapist once a week. They should not be ignored and cause serious harm if not taken seriously. Mental well-being is as important as physical well-being.



## Between a rock and a hard place ...

I am a child: to be or not to be

### Rishabh Raj 8B

The biggest dilemma for a child is when he is expected to be responsible, yet his decisions taking capacity are questioned and worse being, is rubbed off as immature. Doesn't this give an opportunity to take an insight into what goes wrong when a kid tries to make a choice? Not only does it take into account their young age but there is some mental development too that can be taken into account. The human brain is an amazing powerhouse performing varied functions. One gets stumped to know how minute a part is, the function it performs is so valuable to our normal living. The part of the brain that manages our reasoning, problemsolving, creativity and impulse control is the prefrontal cortex which is at a developing stage till the child crosses his adolescent period. We can thus infer in simpler terms that whenever the child takes a decision; it is more based on emotions rather than rationale behind it. They are not able to see or perceive any repercussions in the future due to their decision.

It does not mean that the child should not be given the freedom to be independent. It should be rather encouraged as this would shape them into a better personality in future. They must be confronted with the result of their actions. Rewards or punishments in response to their behaviour do have a long-term behavioural and emotional impact on them. This is when the birth of conscience takes place. The conscience enables the child to differentiate between right and wrong. Correct education and experience help in its better development. Knowing reality and following ethics according to one's conscience helps to make a man.



### Gratitude as a part of positive psychology

### Prisha Modi IB 1 A

Positive psychology focuses on identifying and building mental assets. Writing down three things we are grateful for each day helps us improve our physiological health and makes us look on the brighter side of things. This is a gratitude exercise (one of many) that one can incorporate in their daily practices for a better state of mind. Appreciating different people also helps us increase our self-esteem and makes us more resilient to any challenges we may come across.

Physical health too is connected to our mental well-being, and practicing gratitude reduces the occurrence of illnesses caused by anxiety, depression, and trauma. Better and healthier sleep is also a result of practicing gratitude. It makes one feel lighter and more fulfilled at the end of the day.

Gratitude aids us in building longer-lasting and healthier relationships due to the satisfaction of reciprocation shared between the involved people. This allows us to be more empathetic, sensitive to those around us. A support to reduce recurring emotions of anxiety and stress, gratitude is what helps us overcome that which might be holding you back.

Contrary to the popular belief, positive psychology doesn't solely mean experiencing and accepting positive emotions while completely blocking away all negative feelings. We have to start accepting all types of emotions gradually in order to truly flourish.



## Positive Media Psychology

## IB1A

I'm sure we all have heard about all the detrimental effects of social media on our mental Eileen Patel health, after all, every teenager has heard their parents constantly remind them about wasting too much time on Instagram. Relatable, isn't it? But here is something that completely contradicts this statement: social media can have multiple positive effects on our mental health and the well-being of our society.

> Positive media psychology is based on the constructs of positive psychology that strive to explore the potential of media technologies to impact lives and society for the better. Unlike the medical model of psychology which focuses on solving problems, positive psychology studies the processes that contribute to human growth. As media undeniably shapes a huge part of our life, positive media psychology is an area of heightening interest.

> Technology can be used to benefit our mental health in many ways. Several wearables, such as the Apple Watch, Fitbit and the Spire Stone, can be used to provide real-time haptic feedback to enhance calm and focus through the breath. VR (Virtual Reality) has been used in interventions for Post-Traumatic Stress Disorder (PTSD) and phobias, where the perception of presence functions as exposure therapy in a safe environment. Furthermore, in rural locations, with minimal social services, mobile technologies have provided health care information, delivered literacy programs, opened economic opportunities, facilitated improved water quality, and reconnected families separated by hardship and social unrest.

> Additionally, multiple entertainment organizations have formed to address the gender and racial inequalities on both sides of the camera. Increased diversity among writers, directors and actors can change both how a story is told and the meaning and relevance to the viewer. Interestingly, repetitive, pattern-based puzzle games like candy crush, where players match continually moving colored squares, have also demonstrated that users entered a state of flow experiencing improved mood and decreased stress, now we know why the game is so addictive to date - the application of positive psychology to health is promising - although much work remains to be done. Growing evidence suggests that positive psychological assets are linked to health and longevity. However, more studies are necessary to learn more about when, why, how, and for whom positive psychological assets play a role in good health and whether interventions that enhance these assets will yield health benefits.



## Fun Facts

According to researchers at the University of Pennsylvania, it occasionally hurts to be prepared. If you have a plan B, then plan A is less likely to work.

Fear feels good when the danger isn't real - watching a horror movie or walking through a haunted house generates adrenaline, endorphins, and dopamine but your brain still recognizes you're not in real danger.

Food tastes better when others make it — ever wondered why takeout is always more delicious even though you use the exact same ingredients at home. This is because cooking a meal yourself makes it less exciting by the time you actually get around to eating it, and thus your enjoyment is decreased.

Social media is psychologically designed to be addictive - the 'infinite scroll' is partially responsible for this. When one scrolls through an app or site without actually interacting, their brain doesn't get a stop cue.

Procrastination becomes almost inevitable especially as our brains don't think long-term deadlines are so important. When the deadlines are in terms of days rather than weeks or months, we feel more connected to it due to the day-to-day passing of time.

## Inducing positive emotions

### Viren Gemini IB 1 B

What is the purpose of life? Exploring this question is what gives our life meaning and keeps us motivated in everything we choose to do. Most people would agree with the idea that achieving and maintaining happiness is the most important purpose of life, but every individual has a different approach. This may be by doing what you love for a sense of gratification, the service of others, religious quests for a greater reality and much more. However, one aspect that remains constant is adopting a simple, positive mindset.

Positive psychology stresses the belief that no matter what process/mechanism you choose to follow for happiness, you should aim to stay in a state of flow. A 'flow state' is when you are completely concentrated and involved in the task at hand, with all your energy directed towards achieving full enjoyment from it. I truly believe that such an attitude not only makes individual experiences more memorable and fruitful for me but also the friends and family around me. Therefore, it is truly important to have the right association. Surrounding ourselves with other people in a state of flow with strong personal characteristics can reflect on us and keep us on track to leading happy, successful lives. Some of my favorite people are those who manage to have a positive outlook on decisions that most people would be disappointed or worried about.

The fact is that such a mentality can prevent non-genetic forms of depression and other mental illnesses. When we are fully engaged in an activity we are passionate about, we tend not to overthink our ability, our relationships and other people's lives; hence we don't fall into states of anxiety and stress about judgement, results and the future, instead focusing purely on enjoying the present moment. It results in increased self-worth and esteem because when we focus all our attention on doing what makes us happy, we can live a simpler, more disciplined life and avoid guilt and self-loathing.



## Positive psychology in a nutshell

Vihaan Shah IB 1 B Positive Psychology is the part of psychology that deals with the study of subjective well-being, happiness, and optimism in one's life. Considered a new area of psychology, it contradicts the fact that psychology is mainly based on focusing on negative aspects of human behavior. This aspect of psychology works by analyzing the positive influences in life that directly connect to a human's well-being and determine the person's mental health.

Scientifically, positive emotions are induced by an individual when his or her body releases increased levels of dopamine and serotonin, chemicals released in the brain that play a significant role in making us happy. Low levels of these chemicals are the primary justification for depression-related issues. Signs of non-verbal emotions like facial expressions can easily be examples of such emotions.

Character traits play a significant role in determining a person's positive beliefs. Boosted self-confidence, high motivation levels, high morale, and a developed sense of creativity may be identification factors.

As discussed earlier, mental issues like anxiety, depression, and trauma resulting from low dopamine and serotonin levels. A common practice in reversing this process of insufficient chemicals is psychotherapy. This type of cure involves establishing strong and fundamental connections with the patient. The doctors try to remove the existing symptoms and promote an optimistic nature. This type of therapy has proven to be effective in inverting cognitive, emotional, physical, and behavioral distresses. Individuals suffering from such disorders may feel hopelessness, lack of desire to live, lose interest, and much more, leading to extreme steps like suicidal tendencies.

With an estimation of more than 250 million people affected by such mental disorders consisting of more than 3% of the world's total population, positive psychology intends to contribute towards helping individuals with such disorders to lead a life with a positive approach.



## Reasons for dreaming/having false memories

#### Arya Soni IB 1 A

Most of us have dreams at night, some rather bizarre and unusual. Scientists have been searching for answers to a universal question: Why do we humans dream? First of all, let us dive deeper into the concept of dreams. A dream is made up of the sights, thoughts, and feelings that one has while sleeping. Dreams can be incredibly vivid or emotional, or they can be incredibly vague, perplexing, or even boring. While some dreams are happy, others are frightful or depressing. While many dreams seem random and weird, sometimes they seem to have a structured storyline.

Based on research carried out to understand the science behind dreams, various theories have been proposed over the years. They were first viewed as a bridge between the world of the gods and our own. For a long time, it was believed that they gave humans prophetic powers. However, the introduction of Freud's theory proposed that dreams had psychological significance. According to this theory, unconscious drives, wishes, and wants are represented in dreams. Freud claimed that people are motivated by suppressed and unconscious longings. Although many of Freud's claims have been debunked, research suggests that there is a dream rebound effect, in which repressing thoughts makes us dream about them. Further research revealed that the function of dreams was to construct and reinforce memories, describe our most steadfast desires and fulfill our subdued wishes in our minds. Dreams also help us process and reflect upon the events and information obtained in our daily lives, as well as giving us an outlet to consider and express our deepest emotions.

Many other theories have been proposed to explain why we dream. One theory uses computer metaphors to describe dreams, noting that dreams help "cleanse" the mind of chaos, refreshing the brain for the next day. The reverse-learning theory suggests that we dream to forget. Our brains have thousands of neural connections between memories, too many to remember. Dreaming helps "prune" those connections, and there have been many more theories as well. Yet, to this day, there is no concrete answer to why we dream.



### Why children are unable to make rational choices

Prisha Shah 9B Our brain has various parts which have various jobs to perform. Our choices and personality is affected by the prefrontal cortex, which is thought to be involved in higher cognition, planning, personality, and proper social behavior. As children grow, they develop their brain and get mature to make rational decisions. The front part of the brain (the prefrontal cortex), however, is remodeled last. It is the decision-making part of the brain, responsible for a child's ability to plan, think about the consequences of actions, solve problems and control impulses. While the prefrontal cortex is still developing, children rely on a part of the brain called the AMYGDALA to make decisions and solve problems more than adults do. The amygdala is associated with emotions, impulses, aggression and instinctive behavior. This makes them take decisions dependent on their impulses or emotions which are not rational, such as when someone's fear takes over their senses (as Vision explains to Wanda in Captain America: Civil War)

As children grow older, they develop conscience, which is a sense of RIGHT AND WRONG. The critical period for conscience development is the first three years of life. During this time, brain structures necessary for interpreting social events, experiencing compassion, and making decisions necessary for conscience are being shaped and connected. During this period the limbic system of the brain and its relationship to the prefrontal cortex are forming and beginning to connect. To make children aware about right and wrong and motivated to work harder, guardians should use rewards and punishments. Studies have found that rewards would increase students' motivation to learn and work harder. The rewards and punishment will also increase students' interest in a particular subject. Punishments make children understand their mistakes and make sure that they never repeat them. After their prefrontal cortex and conscience is developed, humans are able to make rational decisions.



## Psychology word search

ANTISOCIAL ANXIETY BEHAVIOR CASE STUDY COGNITIVE CORRELATION
DUALISM
HORMONES
HYPNOSIS
IDENTITY

IVAN PAVLOV NEUROSIS PLACEBO PSYCHIATRY PSYCHOANALYSIS SCHIZOPHRENIA SCIENTIFIC METHOD SIGMUND FREUD SURVEY WILHELM WUNDT

### Link to answers:

