



Positive Thinking and Neuroplasticity

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Abstract

Leadership decides the nature and efficiency of the political system. In representative democracy it is one of the important variables that collective leadership should represent the masses. It's composition should also reflect the various colours of that society. According to 'elite theory' power in the democratic system circulate in particular section that comprises election section of that particular society. Present study is mainly focused on the issues of understanding the composition of the women leadership. Questions addressed in the paper are: who are women political leaders? Do they have political lineage? Do they belong to a section of the society which has hold over power in the pre-independence period? What is the location of the common women in the political arena? Hypothesis is structured on the basis of macro, micro and observation bases: women is still politically on the back foot. Her role in the politics still requires toning and boosting.

Keywords: Positive thinking, neuron, cortex and neurotransmitter

Introduction

Positive Thinking means approaching life challenges with an optimistic attitude. It is a type of thinking that focuses on maintaining a positive point of view towards life. The impact of positive thinking on work, health and life is being studied by the people who are involved in this work, one of these people is Barbara Fredrickson. She was a positive psychologist at the University of North Carolina. She published a landmark paper that provides surprising insight into positive thinking and its impact on skills and mental ability. Fredrickson tested the impact of positive emotion on the brain. She found that positive emotions like joy, contentment, and love broaden the sense of possibilities and open mind to more options. The long-lasting effect of positive thought is that they provide an enhanced ability to build skills and develop resources for later use in life.

Positive thinking is linked to a wide range of health benefits

- Better stress management.
- Enhanced psychological health.
- Increase physical well-being.
- Increase longevity.
- Lower rate of depression.
- Decrease rate of illness.

All this happens because people with positive attitudes are more likely to do regular exercise, avoid smoking, eat a healthier diet and get more quality of sleep. Research suggests that happy people are more resilient in facing stressful events. They perceive their problems as challenges and enjoy their life.

Neuroplasticity: The term neuroplasticity is also known as brain plasticity, is the ability of neural network in the brain to change through growth and reorganization. It is when the brain is rewired to function in some way that differ from how it previously functions, for example the circuit and network changes that result from learning a new ability, inform action acquisition, environmental influences, practices and psychological stress.

Stages of neuroplasticity

1. Fetal phase through until adulthood, when the brain grows and organizes.
2. Through adulthood, for memory and learning.
3. After brain injury, to regain lost functionality or leverage.

Neuroplasticity, the capacity of brain cells to change in response to intrinsic and extrinsic factors, can have negative or positive influences at any age across the entire lifespan. Plasticity allows for a specific body or brain functionally represented in the brain to move to a different region of the brain, when necessary. For example, after stroke, body functions such as limb use can be recovered from paralysis through new connections formed

between intact neurons. This process requires exact stimulation through physical activity or physiotherapy. Thus, new neurons can be formed. According to a study conducted in 2003, it was enlightened that the cortex is more dominated in trained musicians as compared to amateur musicians. According to another study in 2004 shows that bilingual people have a larger left interior parietal cortex than monolingual people. Marian Diamond was the first to prove that the brain shrinks with impoverishment and grows in an enriched environment at any age. (Diamond *et al.* 1971, 1984; Malkasian and Diamond, 1971.)^[8, 9].

Research shows that not only positive thoughts, but yoga and meditation could play a prominent role in neuroplasticity especially after brain injuries. Meditation practice can change the structure as well as function of the brain in a positive way. Meditation before student examination can increase their performance. Dr Andrew Newberg took brain images of Tibetan monks during meditation as expected their "highly intelligence" frontal lobe lit up the screen, just like countless other studies had shown however, what surprised him most was that the meditators "third dimension" based parietal lobes cooled off immensely, which is the same area that loneliness and social isolation brings to a boil. In the same way yoga can increase GABA (Gamma- aminobutyric acid) levels in the brain, which can alleviate depression and anxiety. Yoga practice can also increase alpha waves in the brain.

Benefits of neuroplasticity

- The ability to learn new things.
- The ability to enhance existing cognitive capabilities.
- Recovery from stroke and traumatic brain injuries.
- Strengthening area where function is lost or has declined.
- Improvement that can boost brain fitness.

Improvement in neuroplasticity

- Learning a new language.
- Learning how to play an instrument.
- Traveling and exploring new places.
- Creating art and other creative pursuits.
- Reading habits.
- Enrich your environment.
- Exercise regularly.
- Practice mindfulness.
- Proper rest and at least 6-7 hours sleep.

Our brain is a complex system which consists of at least 100 billion neurons, the communication unit of the brain. Whatever we do, is decided by the working of the brain. The brain receives information from the sense organ in interaction with environment. That's why brain chemistry affects the thinking process and thinking process in turn affects the functioning of the brain. Cortisol decreases when we think of happy moments or feel joy and the brain creates serotonin in response to your positive thoughts. When serotonin level is normal, we feel happy, calm, relaxed, focused and emotionally stable. Positive thoughts impact the brain's prefrontal cortex, which is in front of the brain. When the prefrontal cortex is activated, it increases activity and zeal and heightened mental processes such as creative thinking, intellectual capacity and information processing. Our attention span increases when we think in terms of, "we" instead of "me". The prefrontal cortex is essential for mind and body connection. All your brain functions come together in the front prefrontal cortex, and they'll spread out to the body. It is like the Internet, when we want to know something, we use a search engine, which is prefrontal cortex, the search engine takes the question or information and begin to search the Internet. This signal neurons score for information and send it back when it is found.

The left prefrontal cortex is the part of brain that regulates positive emotions such as happiness. According to Dr. Rick Hanson, Neuroscientist and author of *Hardwiring Happiness*, your brain processes positive stimuli very differently from negative stimuli. Hanson explains the brain is like "Velcro for negative experiences and Teflon for positive ones". The amygdala, which is like an alarm system in our brains, uses about 2/3 of its neurons to look for bad news, Hanson writes. "Once it, sounds the alarm, negative events and experiences get quickly stored within memory in contrast to positive events and experiences, which usually need to be held in awareness for a dozen or more seconds to transfer from short term memory buffers to long term storage". In order for positive events and experiences to hold up to equally intense negative ones, we need to purposely focus on them for much longer. Furthermore, our brains get used to certain patterns of thoughts. So, the more negatively we think, the more automatic the process of thinking negatively becomes, and the more difficult it becomes to break out of that pattern and start thinking positively. Dr Hansen suggests that when you have a good experience, no matter how mild it may be, "One should try to stay with it for 20 or 30 seconds in a row-Instead of getting distracted by something else". This process helps strengthen positive thinking patterns in your brain. The more you practice savoring positive moments and taking in the good, the easier it will become for you to think positively. So, if there is a nice moment between you and a loved one, take 10 to 30 seconds to bask in the glow of the warm feeling. If you notice a particularly beautiful sunset on your walk or drive home, take a few extra moments to drink in it. If you happen to be upon a blooming garden, literally stop and smell the roses. By taking the time to soak up pleasant experiences, you are rewiring your brain to be more positive. So, if you have negative thoughts about yourself or other things, they will strengthen the neural pathway for negative thinking. In order to retain

your brain to think positively, we must think in a positive direction. Studies also showed the greatest change with deep meditation and the greatest increase in volume in monks with extended experience. (Davidson *et al.*, 2003; Davidson and Lutz, 2008) ^[10, 11] advance in technology also made it possible to observe increase white matter connecting the prefrontal cortex to the amygdala in highly resilient individuals (Kim and Whalen, 2009) ^[12]. The connection between the hippocampus and other brain structures suggests avenues used for memory storage and retrieval (Ranganath, 2010) ^[13]. Understanding how humans use stronger signals of desired focus and inhibit distracting variables to focus attention (Lutz *et al.*, 2008) ^[14], can assist in coping with increasing information overload. The practice of certain forms of meditation can strengthen abiding Attention and Selective Attention. (Slagter. *et al.* 2009, Lutz *et al.*, 2008) ^[12, 14] According to Martin Seligman, renowned positive psychology theorist and director of Pan Positive Psychology Center at the University of Pennsylvania, one way to change your mindset is by savoring. When we hear positive news/story, we have positive thoughts or receive positive feedback. It's the savoring approach that begins to create a new brain circuitry- a new neural network that's geared toward looking for the positives, says Hoeltherhoff. The simplest and most practical way to rewire your brain for positive thinking is to take the time to reflect, be grateful, and be aware of positive things in your life, Hoeltherhoff says. According to Lyubomirsky, 'what we choose to draw attention to is really important to our happiness'. Healthy behaviors and thought process around that behavior is established, the brain is structured so that it will maintain the same. John Ratey, the author of 'Spark' and 'A User Guide to the Brain', cites that just 8 to 12 minutes a day of exercise that evokes a sweat demonstrates an increase in a compound called Brain-Derived Neurotrophic factor. These compounds stimulate neurogenesis (new neuron), improve nerve connectivity, strengthen and cleans synapse and enhance neuron and new brain pathway to offset lost ones. Ratey also cites that the inclusion of movement crossing over the body or involving opposing limbs help to strengthen the corpus callosum, which essentially is the glue that connects the right and left cerebral hemispheres of the brain and facilitate cross brain communication. Animal and Human research have shown that environmental stimulation is critical for enhancing and maintaining cognitive functions. Novelty and focused attention are essential components of enhancing cognitive functions (Hahncke *et al.* 2006a,b; Houillon *et al.* 2013) ^[16] Therefore, exercise combined with positive thoughts can be extremely productive at helping people reach their goals. In most cases, people start a new behavior and then stop short, when problems arise or discouragement sets in, instead, exercise combined with repetitive new healthy thoughts make you far more likely to stick with them.

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