

“MEDITATION” A TOOL FOR STRESS RELEASE AND SCIENCE BEHIND IT – A STUDY

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Abstract:

Pandemic has affected our lives on all levels Mental, physical and emotional, financial as well as social. It has compelled us change the way of our lives and also to rethink and slowdown in all aspects. Due to social restrictions the entire human population had to face various health issues. We had to change our way of living in daspects. Gradually we changed the way of living and life came back to normalcy up to someextent but our health affected severely.

Many of us could not cope up with the situation and faced various Physical and Psychological health issues but those who were meditators or knew the importance ofmeditations were took a leap and made best use of social distancing to within and leverage our inner power which is beyond of our body and mind.

This study shows positive effects of mediation on physical and well as emotionalhealth.

When most of the people were struggling with dealing new challenges during lockdown, many of the meditation practitioner have increased their mediations, many have started teaching mediations and seen enormous change and positive results in allaspects of their lives.

They have seen positive results not only in their overall health (Physical, mental, andemotional health), but also in relationship, satisfaction level, peace of mind and theiroverall quality of life has improved.

Those who were beginners and knew the positive effects of meditation, they got an - opportunity to start practicing meditation due to lockdown and work from home. Andcould reap the benefits of meditation.

Note: -Numerous researches have shown that Meditation is therapy to cure yourphysical and emotional illnesses. It is not related to any religion, there is sciencebehind it.

Keywords: *Pandemic, Meditation, Emotional Health, Psychology.*

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Research Methodology:

Primary data- surveyed 25 people who have been meeting for more than 2 years.

Secondary data is used for reference from google, list is provided in the end of thepaper.

Need of Study: Today we are living in most prosperous times we are surroundedby all the comforts and gadgets around us but our stress levels have also raised like never before. We all have faced tremendous mental as well as emotional pressure during timed of lockdown. We have seen the worst time which compelled us to rethinkabout out physical, mental, emotional and social health.

Introduction- There is no manual that comes with us which guides us how to lead stress free and perfect life. From

our childhood till old age each phase in our life has our own issues and stress.

If stress is not addressed before it advances, it can lead to chronic stress and ultimately give rise to many diseases physical as well as mental such as irritability, anxiety and depression, Physical problems such as blood pressure, hormonal imbalance, insomnia and emotional problems such as relationship issues, dissatisfaction and discontentment if life.

Many diseases are psychosomatic (Psycho-Mind, soma-body) originated from mind. Every thought has corresponding chemical release in the body and brings a physiological change and behavioral response.

When we experience stress our sympathetic nervous system gets triggered and causes an increase in breathing, heart rate it is not always easy to return to normal state.

How stress occurs:

Often we do not express our emotions fully. Unresolved issues and emotions cause confusion and anxiety and as we keep on accumulating it on a daily basis and do not release it.

In the busyness of life, we do not address our emotion or can't fully express it due to social restrictions. Unattended emotions and feelings create discomfort and irritation every time we face a similar issue.

Every unattained thought of worry/concern, fear, insecurity (or any unwanted situation or event in our lives) demands our attention and needed to get resolved. Be it is our personal life challenge pertaining to any area of our life viz. Career, Finances, Health, Relationship, Social or spiritual or social/global challenge like corona.

Unidentified issues and emotions stored/accumulated in our body and get manifested in the form of various diseases.

Negative events and experiences get quickly stored in memory in contrast to positive experiences.

Medical science has proved that any disease manifested in our body has a corresponding thought of negative emotion viz. fear, anger, guilt, resentment and so on. These unidentified or difficult emotions might show up during meditation and you get clarity, it makes us more in touch with our suppressed emotions.

Repeated negative thoughts or even a single stressful thought viz. thinking about your scan send you to high beta which is responsible for producing stress hormone.

Worry or anxiousness is just a thought about a future situation that has not happened yet. But when we are overwhelmed by that thought there is an increase in beta waves and which breaks the connecting bridge between conscious and subconscious mind that is absence of alpha waves.

In meditation our breath rate calms down, which causes change in our brain frequencies from high frequency to low frequency. And we feel calm and relaxed.

Anxiousness causes an increase in beta waves and a decrease in alpha waves, and can be affected by low delta and theta waves.

Connection between thoughts, emotions and our bodily response (Scientific Aspect):

At the root of all our thoughts, emotions and behavior there is communication between our neurons within our brains. Thoughts can influence the neurotransmitters in our brain.

Limbic System: The limbic system is the part of the brain involved in our behavioral and emotional responses, especially when it comes to behaviors we need for survival responses.

Behind every emotion there is a complex process. Every time you feel something your body initiates a physiological change, a chemical release and a behavioral response. This process involves multiple processes working together, including our major organs, neurotransmitters and the limbic system. Our limbic system is filled with ancient neural pathways that activate our emotions in response to stimuli and controls our fight-or-flight response through the

autonomic nervous system.

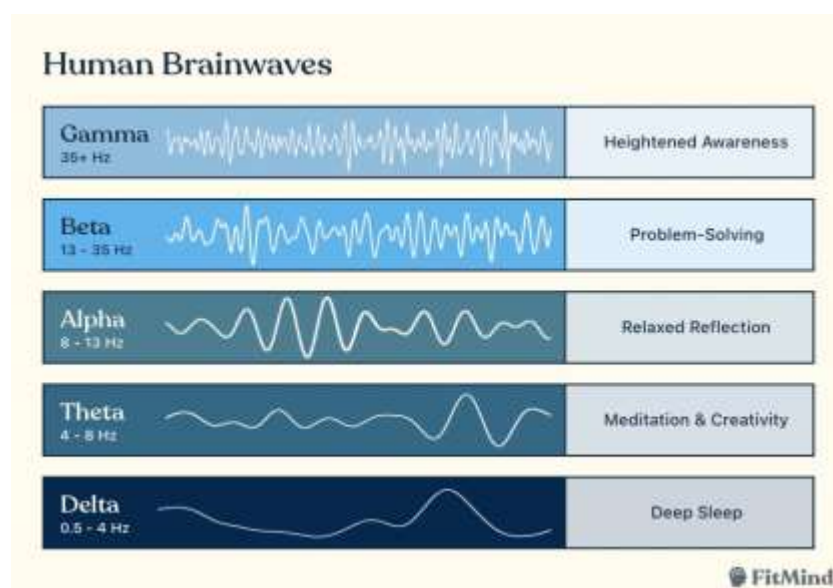
This response evolved from a need to make decisions based on our emotions. As our body fills with adrenaline and our heart starts racing and we prepare to react.

When we are in state of anxiety thoughts of fear and tensions adrenaline gland releases stress chemical and we react to the situation in a particular way.

Neurotransmitters send these signals to endocrine glands and chemicals pertaining to those emotions are released. This electro-bio-chemical response in our body causes us to feel various emotions as per the stimulus response which results into behavioral change.

Cortisol is a biochemical indicator of stress when any situation causes us stress our body goes on autopilot mode and brain waves automatically changes from low to high frequency from alpha to beta or high beta (hyper active mode).

Below is the chart that shows various brainwaves and their frequency range and corresponding state of our consciousness



Sr.no.	Frequency band	Frequency	Brain states
1	Beta (β)	12–35 Hz	Anxiety dominant, active, external attention, relaxed
2	Alpha (α)	8–12 Hz	Very relaxed, passive attention
3	Theta (θ)	4–8 Hz	Deeply relaxed, inward focused
4	Delta (δ)	0.5–4 Hz	Sleep

The science behind emotions:

Our brain waves changes according to what we are doing or feeling.

Brain activity is generally characterized by a combination of brain waves. Depending on what one is doing at the time, a particular brain wave will be dominant over the others. This balance is important. When one's

brainwaves are not balanced properly, that individual may experience both emotional and neuro-physical health issues.

What are Brainwaves?

Our brain uses electrical signals to communicate and organize input and process information. Every time your brain completes a task or has an activity, it generates brainwaves. These waves, or traces of electrical activity, can be seen via the brain scan process. Electroencephalogram (EEG) equipment can map the activity in the brain and provide you with a clear picture of the brainwaves a patient is experiencing.

Our brain produces 5 levels of waves which are electrical impulses between neurons that communicate actions, emotions, and ideas: Alpha, Beta, Delta, Gamma and Theta.

Here are five different types of brain waves, ranging from low to high frequency:

- **Delta** brain waves are the slowest brain waves and are associated with repair the brain and body and producing hormones. Produced at night during sleep. They are generated in deep meditation and dreamless sleep. Healing and regeneration occur when the brain is in this state.
- **Theta** waves also occur in sleep and during relaxation. They are indicative of an inner focus, and dreams and vivid imagery occur in this state.
- **Alpha** waves associated with sense of calm and peacefulness which occurs during quiet, thoughtful times. Alpha waves indicate that the brain is in a resting state or during meditation.
- **Beta** waves are high frequencies, and associated with anxiety and anxiousness and are the most common pattern in the normal waking state. They occur when one is alert and focused on problem solving and while learning.
- **Gamma** brain waves are the fastest and are associated with higher levels of consciousness.

At various conscious level and at different emotional states our brain exhibits various brain frequencies or brain waves ranging from gamma to beta to alpha. It keeps on changing. When we are at heightened awareness state it exhibits gamma waves, at stress, anxiety, guilt, anger, frustration or typically negative emotions our brain shows beta waves, it shows alpha when we are relaxed, shows delta is when we are in extreme blissful state.

When we are in state of fear our alpha bridge disappears and we are cut off from the resources of our subconscious mind, beta waves rush and it is in survival mode.

When our conscious mind is filled with love our brain function very differently with large amount of theta and delta and alpha bridge the connection between conscious and subconscious mind.

When we are in negative emotional state, we are in high beta because that chemical is released. But whenever you are in alpha or delta your mind is organized and your brain is in coherence. By meditation we can bring our brain from high beta to low beta to alpha to theta. When we are in alpha and theta, we are in repair mode. People take alcohol, because they want to relax their nerves and then they can sleep, that can be achieved by meditation. Melatonin is chemical that put us to sleep when we meditate we produce melatonin, it is a magical chemical and can cause to increase our immunity, repair DNA, and increase our life span.

Healthy well balanced nervous system produces appropriate brain waves.

Regular meditation has been shown to increase alpha waves and reduce beta waves (Relaxed state). The brain waves of active thought and learning. That's why it's most commonly recommended for reducing stress.

Deep breathing and closed-eye visualization techniques that mindfulness meditation also boost alpha waves.

When our brainwaves are out of balance there will be corresponding problem in our emotional or neuro-physical health. A healthy human brain copes with sadness when social bonds are broken, communicates with our loved ones and can recognize and regulate our emotions even when they do not feel particularly positive stress, negativity brings down our immune system and ultimately give rise to various diseases. Optimism is linked with better immunity and depressive thoughts are linked with poor immunity. If someone continuously keep saying I am tired our neurons send same signal to our body and your body actually feels as if you are tired.

Thoughts are linked to emotions in bidirectional way Whenever we have a thought there is a corresponding chemical reaction in our mind and in our body as well. The thoughts we are thinking of, the words our mind is processing, are all electrical impulses that can be measured with help of machine.

The higher the frequency of our thought/brain wave, the higher our consciousness. The level of our consciousness is what makes our reality. *We can change the way we feel by changing our thought.*

How the balance is achieved through meditation?

A simple breath observation is effective method of meditation. Breath is the bridge between body and mind as we started observing our breath it gets calm and effects can be seen on levels of body and mind, our body also becomes calm and relaxed and changes can be seen in our body as well as on mind levels. These changes can be also measured viz.-Pulse rate, blood pressure, heart rate, mind waves (ECG).

Findings of survey:

I have served 25 people out of which 19 people have given answers in writing and 6 people have given answers telephonically. Below is the data summary of survey form.

On asking

- 94% people have seen noticeable change in their health.
- 100% people have said that their improvement in their immunity.
- 93% people observe that they have less headache
- 100% people said there is less cough and cold.
- 100% people observed calmness and peace of mind
- 100% people observed clarity in their thought
- 100% people noticed that have clarity towards life.
- 100% people observed that there increase in self- awareness
- 100% people observed their Resilience has increased and they are feeling empowered
- 47 % have done their health checkup recently Find decrease in their blood pressure.

Pulse rate, O2 level and ECG within normal parameters.

Note: - Most of the people who were surveyed have been meditating for more than 5 years and are teaching meditation. According to them not only the meditation but working on yourself and knowing yourself is necessary to get clarity about life and leading a peaceful life. One should work on one's thoughts, values and beliefs to get clarity about yourself. It may take years but if you keep on working on your thoughts, values and beliefs there will be less confusion about life. And decision making about life will be easier which will make less confusion in our lives.

Along with meditation right understanding, practicing mindfulness and breath-work has phenomenal results in their

lives.

EFT before doing meditation has also proved beneficial. EFT tapping before meditations helps to reduce negative thoughts.

EFT tapping along with affirmations or just by acknowledging the negative emotion it can be released.

When we are angry, agitated or frustrated, it is advisable that we should always address that emotion and release it. It can be done by tapping EFT points along with affirmation, humming for at least 15 min, using gibberish language to throw away your frustrations or by shaking your body or breath- work or by any physical exercise, or at least acknowledge whatever the issue is, and by accepting it that it exists in us and then start meditation. Or else agitated state might get aggravated when we sit for meditation with such state of mind.

Conclusion:

Meditations causes us to accept all the life situations and challenges the life throws tous.

Mindfulness along with “Right understanding” brings proper perspective towards lifeand difficult life situations when life is going tuff. Proper perspective brings right understanding which make us resilient and strong and we start accepting all life situation instead of getting frustrated and feeling helpless.

Resilience gets built when you deal with the challenges of life with courage and yourself-image and self-confidence increase in life with such small victories.

It helps us in coping with life and nurturing personal growth, increase concentration, insight, or awareness of the present moment, promote relaxation, reduce stress, settle the mind, achieve a state of increased consciousness,reduce perceived suffering and increase happiness.

Meditating for at least 30 minutes has also been shown to decrease production of cortisol, a hormone produced during stressful times, and replacing it with endorphinswhich are responsible for feelings of relief. Endorphins also produce a happy and refreshed feeling, and strengthening the body’s immune system while simultaneouslyadjusting brain waves to ensure a calm mind for a better night’s sleep Joy, happiness, blissfulness, love are our true nature when we are in these states we are connected to our subconscious mind when we are in state of anger, hatred, anxiety we loss the bridge between conscious and subconscious mind that is alpha waves are disappeared and there is increase in beta waves.

This study shows that Meditation is panacea for all the ailments physicalemotional/mental.

Limitations:

Due to time constrains it was not possible to collect sufficient data, hence I havetaken a sample size of 25 people only.

References :

- 1) Internet- Google
- 2) <https://www.researchgate.net/figure/Figure-1-Different-types-of-Brainwaves-Source->
- 3) Figure-adapted-from_fig1_329642264 (<https://www.howitworksdaily.com/the-science-of-emotions/>)
- 4) <https://mybraindr.com/4-types-of-brainwaves-and-how-they-impact-your-mental-health/>
- 5) (<https://www.goodtherapy.org/blog/psychpedia/brain-waves>)
- 6) <https://www.samitivejhospitals.com/article/detail/happiness-hormones>
- 7) <https://www.neuroscienceinc.com/news/2020/stress-anxiousness-and-the-brain-wave-connection>.

Guidance and Inputs received from -

I have received valuable inputs from below persons

- 1) Mr. Krishna Patil- Spiritual scientist and a meditator for more than 20 years. He played role at many corporate companies at senior level.
- 2) Mr. Shashikant Joshi- Mediator for than 20 years. Retired Mechanical engineer
- 3) Dr. Ramesh Yadav- Homeopathic doctor practicing for more than 25 years. Meditators for more than 5 years.
- 4) Dr. Shruti Apte- Working at Ace Hospital, she has also done research on effects of meditation. Meditator for more than 5 years

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