
Practicing Mindfulness Affects the Physiological Hormonal Response to Stress and Assertiveness

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Introduction

Humans are, unlike other animals, that can cause fundamental changes in themselves. Such as reaching to God Access to fair or attainment In order to create a new state that is a state of light, freedom, freedom from feelings of oppression, fear, reduced by deep happiness. Superior to what was previously felt in happiness and suffering Usually human beings feel imperfect. Feeling that they are missing something Therefore struggling to seek to fulfill such things as money Superfluosness Excitement As well as violence Finding things outside to fill for oneself Became consumerism Destroy the environment Causing global warming But still does not make human beings happy Because true happiness must come from within the human mind. This creates a stream of practice known as mindfulness or mindfulness. (Mindfulness) to remember Regardless of whether he is aware of any matter, such as in his mind and breath Or remember to know the present while But the human mind Not at rest For a glimpse all the time. Therefore need to be trained Because the practice of the mind will bring happiness as Buddavajjana (from Tapitaka common Buddhist Texts; Guidance insight from the Buddha, 2018) said that *“Taming the mind that is difficult to control, that alters fast, And that falls upon whatever it likes, is commendable. A tamed mind brings happiness.”*

1. Mindfulness training

The meaning of mindfulness

Sati corresponds to English as mindfulness; attentiveness; detached watching; awareness (Phra Brahmaganabhorn (P. A. Payutto), 2014)

Mindfulness, according to the meaning of Buddhism, means remembering, not being careless, to control over the activities that are being done.

Mindfulness is a verb or symptom of the mind. Who can act to remember or be ready Is one of Chetasik 52 (item 29) is Sangkharn Khan Is one kind of mental or mental action And it is the Sangkharn Khan that the Buddha praises that "consciousness is useful in all places", so it is something that should be prayed, that is, **to grow**. Phra Brahmaganabhorn (P. A. Payutto), said that mindfulness or mindfulness means meditation. In a general sense, meditation is used in English as Meditation. Corresponding to the Buddhist meaning the exact word should be “Concentration” reads Concentration, meaning concentration. Centering Attention Which is more likely to match the Buddhist meaning Mindfulness is practiced in Christianity, Islam and Buddhism, where Buddhist Mindfulness Meditation is very popular in both the West and the East. In both the Great Sati Patthana and the Anapanasuttha. Professor Emeritus Prawet Wasi (Prawet Wasi, 2012) said that mindfulness exercises induce changes in brain structure and function of the brain. And there is a secretion of happiness Making them feel comfortable, such as substances or hormones, endorphins As well as making the different parts of the brain more connected and more coordinated The connection between the left and right brain called the corpus callosum is more thick. And the frontal part of the brain called the Prefrontal Cortex, located behind the frontal skull. Performing profound intellectual duty Including judgment, decision making, and morality

In conclusion, it can be concluded that mindfulness is the practice of mindfulness in the present moment and not judging through unwanted thoughts. Have an analysis Or evaluation Mindfulness is aware of one's own activities or actions in every moment. Mindfulness means remembering, not forgetting, mindfulness is mindfulness. That only happens with a good mind Not born with the evil mind Serves to help keep the mind healthy Only think about what is beneficial and results in happiness. Remember only what is the charity

How to practice mindfulness (Meditation) or mindfulness methods (Concentration)

The meaning of training Or mindfulness. If you give meaning according to the state of mind, there are 4 attributes as follows.

1. Being Present
2. Self-awareness
3. Contemplating the truth (Contemplation)
4. Being neutral

In the Buddhist concept, consciousness is emphasized. By contemplating the truth Which is the conscious awareness of things in reality And led to contemplation to know one's own mind, to know one's desires, desires, desires Will cause wisdom Mindfulness is a tool for directing the mind in the right way.

Phra Ajarn Paisal Visalo (Phra Paisal Visalo, 2016) mentioned how to practice mindfulness. Is to take care of the body With simple mental training principles in everyday life, which is when the mind thinks To know immediately or mentally Pampered with the body all the time that What does the body do? It is called a pattern of mental practice. This may be done by closing your eyes Or open your eyes You can practice mindfulness by knowing your every movement. For example, making the palm of the hand back and forth, realizing Or walking meditation Time to walk back and forth It is to put your hands together behind your back or crossing your arms, and when walking, you know that we are walking, keep yourself comfortable, do 5-10 minutes a day, do so often, practice often when the mind is distracted. Easy This is a way of growing our consciousness. And known to let go of emotions Let go of grief, mindfulness, to know what is involved or the interaction between our mind, body, and emotions.

Friday Jai Charoen Suk and the team (Friday Jai Charoen Suk and team, 2016) have mentioned that consciousness Refers to awareness of the nature of the perception of various stimuli The impact of all 5 senses is the eyes, ears, nose, tongue, body, and mind. The perception of body movement while walking Or the perception of the wind blowing your hair And the sunlight that shines on your face The perception of walking where the foot hits the ground Recognize that the floor is hard or soft. And awareness of emotions such as knowing how angry, upset, etc.

John Kabat-Zinn (Jon Kabat-Zinn), the practitioner of the four Satipatthana practices. Giving the meaning of mindfulness means recognizing current experiences while.

Important practices that the Lord Buddha has developed for the cultivation of mindfulness. It is mentioned in the international version of Dhamma Way from Buddhism (Mahachulalongkornrajavidyalaya University, 2018)

There are 2 things which are

1. **“Mindfulness 4”** (can be both simple and introspection) means the base of mindfulness, or mindfulness, which teaches to watch and observe the characteristics of the body, pity (feeling), mind (mind), and dharma (a form of Reality) or in other words It is a consideration of the conditions that arise and which disappear. Both inside and outside

Mindfulness means the location of mindfulness, which is body, feeling, mind, and mind-objects. Mindfulness 4 is classified into four categories as follows:

- 1.1 Kayanupas Na Satipatthana is the consciousness to establish and follow the body.
- 1.2 Compassion Nupusana Satipatthana is the consciousness to set and follow compassion.
- 1.3 Mindfulness Consciousness is the consciousness to set and follow the mind or thought.
- 1.4 Thammanupasana Stiphat is the consciousness to set up and follow the dhamma or emotions that arise with the mind.

2. Anapanasati means consciousness, mindfulness, breath. It is a method of practicing mindful breathing, with a total of 16 steps, with the first 4 steps being the mindfulness, mindfulness, and physical awareness of the body, the next 4 steps are mindfulness, mindfulness, and sensation (Vedhana). And the last 4 stages are the mindfulness.

Phra Ajarn Pramote Pamocho (Suk-Jai Charoensuk et al, 2016) discusses the practice of mindfulness, there are two main approaches: mindfulness in daily life There are two types of mindfulness and meditation practice: normal mindfulness and mindfulness, where 1) normal mindfulness utilizes a charitable work. Or in everyday life, and 2) mindfulness to utilize in the practice of Vipassana meditation with natural consciousness being extinguished. With the mind every moment Therefore need to keep practicing mindfulness often, mindfulness practice can be done through meditation

The mindfulness mentioned above can be seen that in the Tripitaka is not mentioned. Requiring practitioners to receive any services as they are today that the practitioners must receive the act that "pong nor yob nor" or "Samma Arahang" or "Buddho" that speech of the exegete set up after the Buddha

period. In conclusion, it can be concluded that mindfulness is a process of developing psychological skills that increases through experience living in the present. This includes acceptance, care, awareness, input, attributes as mutual strengthening. Observation Watching the breath in - out. It creates a real acceptance process that takes place without judging or evaluating consciousness, awareness. Will help strengthen each other over time. Causing the change of inner strength of oneself Mindfulness promotes physical, mental, and spiritual health as a holistic self-care. Mindfulness is a process (Transformative process), the process of linking the change of consciousness and harmonizing.

2. The practice of mindfulness causes changes in oneself.

Mindfulness has resulted in 3 changes in yourself:

1. Changes by symptoms Mindfulness training has resulted in good physical, mental, social and intellectual health, or known as being physically healthy and rarely ill. Anything is easy to recover, has a good mind, not easily angered, calm, happy.

2. Changes that can be detected By physical examination will find that slowed pulse has a lower blood pressure The cortisol levels in the blood and urine are reduced, meaning low stress in the body. Increased immunity Making cancer infections less common It also found substances that make the body more peaceful, such as Endorphins, Dopamine Serotin, Arginine Vasopressin, and GAB (Gamma Amino Butyric Acid).

3. Brain changes Emeritus Professor Prawet Wasi said there was a collaboration between the Dalai Lama and Western psychiatrist Dr. Daniel Siegel, director of the Center for Mindfulness Research at the University of California, Los Angeles (UCLA) interested in self-practice. And compile the effects of brain changes that occur from mindfulness in the book Mindfulness Brain describes the changes in the brain structure and function of the brain. And there is a secretion of happiness Making them feel comfortable, such as substances or hormones, endorphins As well as making the different parts of the brain more connected and more coordinated The connection between the left brain and the right brain called the corpus callosum thickens. And the frontal part of the brain called the Prefrontal Cortex, located behind the frontal skull. Performing profound intellectual duty Including judgment, decision making, and morals.

John Kabat-Zinn (Jon Kabat-Zinn) is an enthusiast in Buddhism that he has practiced mindfulness according to Satipatthana 4 himself, saying that mindfulness helps to find peace in the face of problems. And also found that the symptoms of high blood pressure decreased And he has applied the practice of mindfulness to the patients and doctors in the hospital where he works effectively. So he developed a Mindfulness-Based Stress Reduction program, so many researchers researched on this subject. And found that practicing mindfulness according to this approach reduces stress, depression Migraine pain Pain in end-stage cancer patients ADHD symptoms Severe fears, etc., and his programs have been applied in psychotherapy and psychological counseling. Forms of mindfulness and practicing mindfulness in everyday life are essential to mental life.

Mindfulness stimulates the nervous structure and blood circulation in the brain. It was found that there was an increased release of dopamine, which is closely related to a decreased desire to act. Mindfulness leads to stimulation of two neurological structures. (dorsolateral prefrontal) and (cortices) the hippocampal parietal region, the cingulate cortex, the anterior striatum and the precentral gyrus (the gyrus. The central gyrus in the human brain is the primary sensory receptors of the physical sensory system and the postcentral gyrus, which are involved in the attention and function of the autonomic nervous system. Caused neurological changes associated with increased levels of alertness and relaxation (Witkiewitz, Marlatt and Walker, 2005). **Stress**

Meaning of stress

Hans Selye defined "Stress is the body's response that occurs not specific to a threat or danger. Where there is a cause or a result of something desirable or undesirable "

In other words, stress is a physiological response (physiological) and psychological (psychological) towards important or unexpected changes in life. Which is caused by external and internal factors

Stress can be categorized into two types:

1. Acute stress is stress that occurs suddenly, such as shocking from loud noises. The body experiences an environment change, including heat, cold, and stress. Adapt to normal which is to maintain equilibrium (homeostasis) of the human body to be in a normal state.

2. 2. Chronic stress is stress that accumulates over a long period of time, such as family problems. Problems at work, study, and this type of stress are difficult to remove, and if left for a long time, it can lead to physical changes. Because the body is unable to maintain equilibrium in its normal state as well as changes in mood and personality symptoms of this stress are more severe than type 1 stress, and if severe, you need to see a psychologist or psychiatrist for advice.

Cause of stress

The causes of stress can be various. But can be divided into 3 large groups which are

1. Physical aspects such as chronic illness Or a little illness
2. Psychological aspects such as fear of things Anxiety Guilt
3. Social aspects such as problems of adapting to a new society Family conflict Job change

When there is stress, whether it is acute stress or chronic stress, it occurs. Will result in the body having a physiological response to stress The physiological stress response mechanisms in which this response mechanism is controlled by the autonomic nervous system and the endocrine gland hormone are shown in Figure 1.

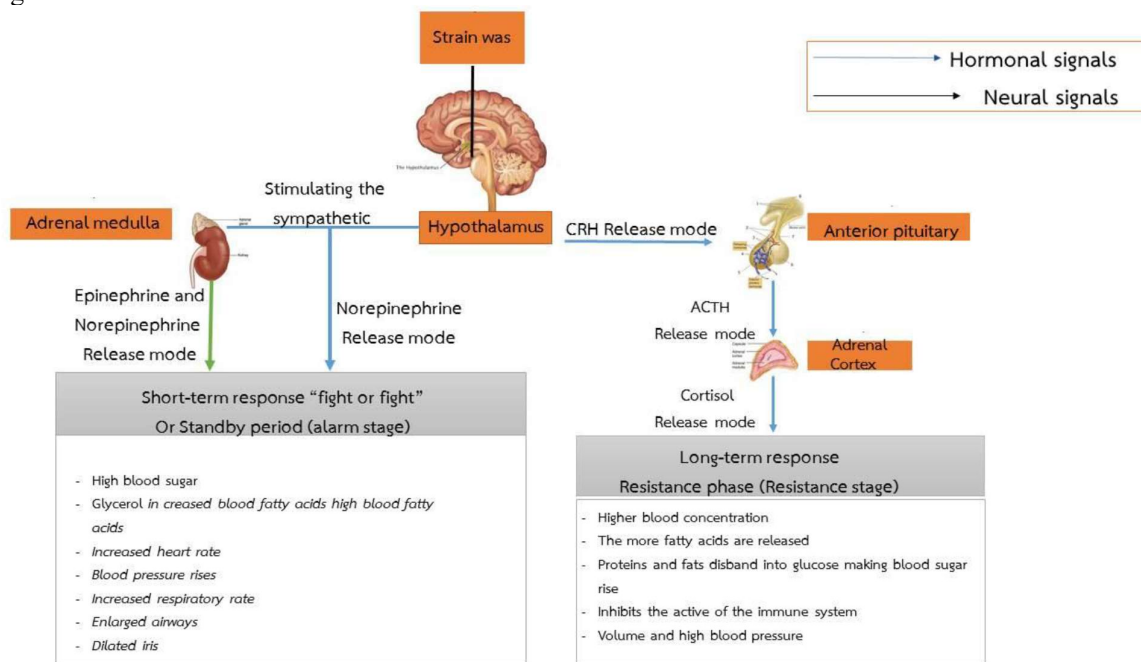


Figure 1 Physiological stress response mechanism

From: Shier, David., et al. Hole’s essentials of Human Anatomy & Physiology. 10Th

The physiological response to stress is caused by a reaction known as “Stress response” or “general adaptation syndrome”, the reaction consists of 3 phases: as follow

1. The alarm stage. The body is aware of the danger. The body is prepared to deal with the danger automatically. This causes the body to cause symptoms known as "fight or flight (fight or flight)" which is controlled by hormones from the endocrine glands and nervous system.
2. Resistance stage the body undergoes biological changes to try and resist stress to keep the body in equilibrium.
3. The exhaustion stage. If the body is under stress for a long time. The balancing act in the second step does not allow the body to maintain a balanced state, and the various systems in the body become overworked, causing illness or developing into depression.

When stress strikes The hypothalamus stimulates the sympathetic nerves, causing the inner adrenal glands (the adrenal medulla) to release epinephrine. (epinephrine) and Norepinephrine. (norepinephrine) is released, the end of the sympathetic nerve fibers themselves also secrete the norepinephrine. This causes body changes such as increased breathing speed, dilated iris, increased heart rate. Increased blood pressure More blood supply to the skeletal muscles. It is preparing the body to be ready to fight or escape. But if stress accumulates over a long period of time, the hypothalamus secretes hormones. Corticotrophin -

releasing hormone (CRH) stimulates the anterior pituitary gland to release adrenocorticotrophic hormone. (adrenocorticotrophic hormone (ACTH)) by this hormone stimulates the adrenal glands (adrenal cortex) to secrete cortisol (cortisol) increases, resulting in the body gradually. Adapts to maintain normal body condition against stress. Resulting in body changes such as increased blood pressure The amino acids in the blood are more concentrated. The body releases more fatty acids. Increased glucose production from non-carbohydrates Immunity in the body is reduced so it is easy to get sick. And high levels of cortisol increase the risk of atherosclerosis. And ulcers in the digestive tract or other diseases.

The effects of stress have three aspects:

1. The body's high blood pressure. Vascular constricted or blocked arteries, more HCl secretion in the stomach than normal, various diseases are easily caused if stress accumulates over a long period of time. Will make health worse Due to the large amount of cortisol released In which people with diseases such as diabetes, this hormone will stimulate the blood sugar level to rise abnormally. Can be life threatening.
2. Psychological and emotional aspects Causing lack of concentration and caution, forgetfulness, and not interested in the surroundings Loss of self-confidence If stressed for a long time This will increase the secretion of cortisol, resulting in brain atrophy and decrease in number. Affect intelligence and memory Or have symptoms of depression More anxious than usual.
3. Behavior: Behavior may differ from person to person, such as being hungry all the time. Loss of appetite, difficulty sleeping, or insomnia several nights in a row Some people may change their behaviors such as drinking, drug addiction, gambling, aggression, self-harm and others.

While stress can have a negative effect on physical and mental health, stress has another advantage: It gives us the determination to overcome the problems that arise. Help in various tasks As the law of the Jerks-Dodson (Yerkes-Dodson Law) describes the relationship between stress level and performance at work to be successful. It has been shown that if a person has an optimal stress level, he or she is most likely to stimulate their performance. But if you have a low level of stress you will feel bored. No enthusiasm Causing low performance Or if there is an excessive level of stress, it can lead to decreased work performance Have a negative effect on work It negatively affects the physical and mental state (Picture 2).

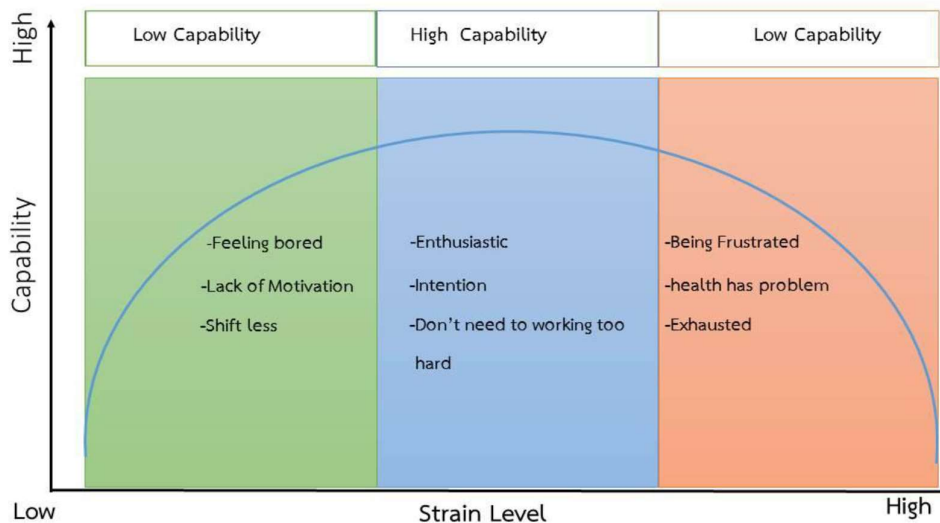


Figure 2 Graph showing the rules of Yairks-Dodson (Yerkes-Dodson Law)

Assertiveness

The meaning of assertiveness

Sompoch Lamsupasi (PhD Sompoch Iamsupasi, 2013) provides a definition. Courage expressed that "Courage to express It is a behavior that is the ability to express a person in the most natural way,

according to their circumstances, and can deal with problems in a positive way without anxiety. "Assertiveness Corresponds to the English language that "Assertive" reads "Aser - Tifu" is an adjective (Adjective), which means confidently. Assertive or assertion of one's thoughts And in psychology, it means that people express themselves in words or in action. We have an opinion on a particular subject. Without hiding or circumcising Assertiveness is close to the word "Aggressive" read "Agress-Sifu" is an adjective (Adjective) meaning aggressive, offensive, aggressive.

Assertive behavior refers to the behavior that is the ability to express, present, or express a person as naturally as possible according to the situation and can deal with problems in a positive way by: Without anxiety

Characteristics of assertive behavior (Assertive Behavior) is divided into 6 characteristics:

1. Basic Assertion is an expression to maintain one's right, belief, feelings, and opinions.
2. Empathic Assertion is expressed in a way that goes beyond basic feelings to convey a feeling of empathic understanding towards another person.
3. Escalating Assertion: A person should express himself in a manner that is least negative, Rimm & Masters, but with the desired effect.
4. Confronted Assertion is an expression of objectivity that expresses what a person has done.
5. Assertiveness in the use of language.
6. Assertion and persuasion (Assertion and Persuasion) is an expression that requires others to accept their opinions. Without showing aggression.

Assertiveness is trained for people with problems When practicing successfully, it becomes a habit of the trained person. And enabling people to be trained to have the ability in various fields, in line with the theory of behaviorism (Behavioral Theory), which believes that all behaviors arise from learning. From the environment (SOR) and the cause is in the form of one of the stimuli (Stimulus: S). The source of organic stimulation (Organism) causes the organic response (Response: R) to come out.

Joseph Wolpe (1969) says assertiveness is associated with anxiety or fear because assertiveness is used to treat anxiety and reduce stress. Which the practice of assertiveness will reduce fear Practice relaxation And if humans have fear His anxiety would not be expressed (Neurotic Fear).

Dr. Rick Hanson (Rick Hanson, 2009) says that building guts Build Strengths through By Mindful Meditate is a modern way of creating positive feelings. Empower yourself It's like a way to build a network of neuroscience. And to build and manage the muscles of the nervous system of the brain (Which is the wisdom of the ancient people Administrative And the development of human intelligence By repeating it often, it becomes a habit every day, every year on a regular basis) because the method of meditation practice is to create a nervous system that will clear the mind that can induce the structure of the brain. Consistently positive This will affect the physical and mental changes that will lead to learning. And continued self-control well.

Supapun Klinnak (Supaphan Klinnak, 2018) said that mental work (behavior) affects brain cell function. And in the same way, brain cell activity affects mental function. That means If our mind is thinking or intending to do something Then will affect the function of brain cells Link nerve fibers And the secretion of chemicals in the brain And if our brain experiences any perception Will affect the change of the state of mind as well To train the mind to always be in good shape. Will help improve brain function as well Or giving the brain to know its ability (Perceive self-efficacy) a person must believe that human behavior can occur as the person determines. If giving the nervous system a positive experience Will have a major effect on the state of mind

Adclide W. Hede, says that if students have self-confidence, Will enable students to speak a second language Self-confidence is directly related to speaking English.

Dr. Phal, Michel Le Pagils, a psychologist, conducted experiments and proved that A child's self-confidence is directly related to assertiveness. And children from the upbringing of a family that has built up their confidence. Will give him the courage to express himself well Including teaching how to use words to children that What kind of words should the child use to make him look more confident and assertive? Or use any kind of speech that will make the child show offensive behavior as well.

In conclusion

Mindfulness has an effect on stress. Stress affects assertiveness. Because the practice of mindfulness or mindfulness, whether it is meditation Anapanasati style Or Vipassana Kammattana, a Stipathana 4

mentioned in the Maha Satipatthana formula In the Tripi, the rules that the Lord Buddha discovered by himself. Practice by himself Found to induce changes in brain structure and function of the brain. Making the structures of the brain more linked, more coordinated The connection between the left brain and the right brain called the Corpus callosum is thicker. And the frontal part of the brain called the Prefrontal Cortex, located behind the frontal skull. This makes the practitioner on a regular basis feel airy and comfortable and emits a message of happiness called Endorphins Hormone Dopamine Serotin, Arginine Vasopressin Hormone and GAB (Gamma Amino Butyric Acid) came out. And gives good intelligence, judgment, judgment and morality Including having a relationship with assertiveness by making them more assertive, less fear, less anxiety. And if the body is stressed and assertiveness at the right level will help stimulate the highest performance. But if there is stress Assertiveness is low, it will feel bored. No enthusiasm causing low performance or if there is an excessive level of stress, it can lead to decreased work performance. Have a negative effect on work Adversely affects the physical and mental state If acute stress or chronic stress occurs will result in the body having a physiological response to stress (physiological stress response) have a negative effect on work Adversely affects physical and mental conditions If acute stress or chronic stress occurs Will result in the body having a physiological response to stress (physiological stress response) in different ways, which when stress conditions occur The hypothalamus stimulates the sympathetic nerves, causing the inner adrenal glands (the adrenal medulla) to release epinephrine. (epinephrine) and Norepinephrine. (norepinephrine) is released, including the end of the sympathetic nerve fibers also secretes the noriepinephrine. This causes body changes such as increased breathing speed, dilated iris, increased heart rate. Increased blood pressure Therefore, if there is regular mindfulness or mindfulness, it affects the physiological, hormonal response to stress and human self-expression.

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