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The Impact And Benefits Of Yoga On Neurocognitive Disorders And Psychological Disorders From The Perspective Of Eastern Psychology

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From the perspective of Eastern psychology, yoga represents a powerful tool for promoting mental and physical well-being. Yoga is not just stretching; it is a practice that connects the body, breath, and mind. It focuses on breathing exercises, physical postures, and meditation. It is a way to relax the body, mind, sympathetic nervous system, and unnecessary thought processes and maintain a balance between body and mind. Many people get a lot of benefits from practicing yoga, and this benefit is visible in their physical and mental health. Hence, we reviewed current research and significant studies that bring about several neuropsychological, and psychological problems and collected detailed information on how yoga practices have beneficial effects on many people with different types of psychological problems, along with yoga's positive impact on cognitive function, the neurochemical, and synaptic connections. By addressing the root causes of neuropsychological and psychological disorders, yoga offers a holistic approach to healing that integrates the body, breath, and mind. Through regular practice, individuals can experience profound transformations in their mental health, cognitive function, and overall quality of life. It was also found that yoga reduces stress, anxiety, depression, neuropsychological disorders, and psychological problems. We can draw the conclusion that yoga may be beneficial treatment for a variety of psychological issues and neuropsychological illnesses, providing hope and healing to those who follow its teachings.

Keywords: Neuropsychology, yoga, neurocognitive disorder, psychological problems and practice.

According to Cornelissen, R. M. M., Misra, G., & Varma, S. (2014) eastern psychology is tied into the eastern (Buddhist, Hindu Taoist) philosophy and theology, is more subjective and inward looking. It benefits everyone, not just those with mental illnesses. It makes an effort to elevate the individual to a greater emotional consciousness and enlightenment through a variety of techniques, including yoga, meditation, and introspection. In Eastern tradition teach that everything is impermanent like the breath raises and falls for the season come and go, all things are seen as being in constant process of arising

forming and dissolving. Enlightenment denotes the highest state of spiritual and psychological development and transcendence. Our illusion and distortion caused by our believe in the fictional ego bent on the fortification and justification of the self, prevent us from recognising the underline harmony and unity that pervades all of life. Eastern psychology is believed in collectiveness, spirituality, permanence, truth seeking and prepare us for the detachment from physical world and materialistic world. Yoga is a very important part of eastern psychology. Arndt Büssing, Andreas Michalsen, & Sat Bir S. Khalsa, et al. (2012) found that yoga first heals body through physical practices and then moved and heals us internally and leads to inner self consciousness.

Patanjali defines yoga as "Chitrit Vrtti Nirodh" denote the end of all mental activity modification, including ordinary or non-ordinary affect, volition, and cognition. When it reaches this state, the pure will will remain in one's own essence, which is the ultimate goal of yoga. As previously seen, the goal of yoga is to transcend the individual, and the state of Samadhi is the means by which this transcending is accomplished. The practice of voga requires ethical preparation.

According to Ncert (2015) that the Sanskrit root "Yuj," which meaning to combine or join, is where the word "yoga" originates. Yoga's ultimate goal is the combining of the transcendental and empirical self. Yoga's history dates back ten thousand years, to the time of the Tantric Civilization, which flourished all over the world. Up until the present era, it has undergone constant development since then. Over this time, the term "yoga" has been employed for a variety of purposes, and various forms of yoga have emerged. There are references to yoga tradition in works of literature that preceded the yoga sutra by a great deal, such as the epic Bhagavad Gita.

According to Ncert (2015) There are different types of yoga

- Hatha- yoga is a strong kind of yoga that focuses on the body's growth and may be able to withstand the effects of transcendental enlightenment through as an apractice. This technique uses challenging physical workouts and postures to encourage concentration.
- Jana yoga: Its goal is knowledge-based realisation. Every school of Indian philosophy views ignorance as the primary cause of suffering, and Jana yoga aims to eliminate ignorance by achieving enlightenment. The goal is to acquire knowledge.
- Bhakti yoga: This is God's compassionate devotion. It allows someone with an emotional temperament to think about things from a spiritual perspective that transcend their own constraints. The individual's emotional energy is cleansed and directed toward the divine in accordance with God's will. It emphasizes feelings and pure affection for God.
- Karma yoga: For people with an energetic disposition, it is a desirable and active route to liberation. In it, one is committed to the action without wanting its results. Renouncing the results of activity is the goal of karma yoga. Instead of renunciations of action, it is the renunciation expressed in action. It emphasizes altruistic behavior.

Patanjali regards Ashtanga yoga as "multidisciplinary approach to ultimate self-realization". He divides the eight components into the three categories of disciplines:

- 1. **Religious and ethical** (the Yama and Niyama)
- 2. **Physical-Vital** (Pranayama and Aasan)
- 3. **Psycho-spiritual (Pratyahara, Dharan, Dhyan and Samadhi)**In the ashtanga yoga or Eight Limb yoga of Patanjali, there are eight elements;
- 1. Yama (moral instructions), (do not) starts Bahiranga yoga
- 2. **Niyam** (self-purification), (dos)
- 3. **Aasan** (poster)
- 4. **Pranayam** (rhythmic breath control)

Noted that Yama, Niyam, Aasan and Pranayam is a part of Bahiranga yoga

- 5. **Pratyahara** (sense withdrawal, (starts antaranga yoga)
- 6. **Dharan** (concentration)
- 7. **Dhyana** (meditation)
- 8. **Samadhi** (higher unitive consciousness)

Noted that Pratyahara, Dha<mark>rana, Dhyana and sam</mark>adh<mark>i is a part of Anta</mark>ranga yoga

Two categories have been established for these eight limbs: Antarang yoga (internal yoga) and Bahrianga yoga (external yoga). It holds a central place in Antarang yoga due to its connection to meditation, transcendence, and a higher spiritual level. Perception, contemplation, or inquiry are the first steps in the Antarang yoga process, which ultimately results in a transient or permanent condition of transaction. Contrary to popular belief, Antarang yoga is not just a physical workout; it is a cognitive yoga practice. Pratyahara, which sits in a unique intersection between Antarang and Bahiranga yoga, is the first step in the cognitive or psychological portion of the eight limbs method to yoga. Pratyahara can therefore be viewed as the gateway to Antaranga yoga from Bahiranga.

Actually, it is impossible to practice and apply Pratyahara for the psychic upliftment in yoga without a thorough understanding of the concept component. The concepts and practice of yoga's eight-limb path .

- Yamaha; The five moral restraints Ahinsa, Satya, Asatya, Brahmcharya and Aparigraha.
- Niyamas: The five observation such as Soch, Santosh, Tapas, sawadhyaya and Ishwara parinidhan.
- **Aasan**; Posture, physical poses with breath mind and spirit to create strength, flexibility, balance and focus.
- **Pranayama:** Mindful breathing, expansion of prana or life force, vital energy through control of breath.
- **Pratyahara:** Turning inward withdrawal of the sense of mind.
- **Dharana:** Concentration focusing and attention

- **Dhyan:** -Meditation, reflection and observation
- Samadhi: Union of self with object of meditation bless and enlightenment, spiritual illumination and Seeker become the Seer.

Objective of the study

- To study the impact and benefits of yoga on neurocognitive disorder from the perspective of Eastern Psychology.
- To study the impact and benefits of yoga on psychological disorders from the perspective of Eastern Psychology.
- To study the effect and benefits of yoga on neurotransmitters activity related to psychological disorders and neurocognitive disorders from the perspective of Eastern Psychology.

Research question

- What are the impact and benefits of yoga on neurocognitive disorders from the perspective of Eastern Psychology.
- What are the impact and benefits of yoga on psychological disorders from the perspective of Eastern Psychology.
- What are the effect and benefits of yoga on neurotransmitters activity related to psychological disorders and neurocognitive disorders from the perspective of Eastern Psychology.

Method

The study is mainly analytic in nature. The secondary information has been collected from various publication, periodicals, articles, reports, books journals and newspapers, etc. internet sources and website were also consulted for the purpose of study.

Findings and discussion

What are the impact and effect of yoga on psychological disorders from the perspective of Eastern Psychology.

Yoga and psychological disorder: - Psychological problems arise due to inadequate changes in a person's thoughts, emotions and way of looking at the world. When a person practice yoga like Pranayama, he concentrates on his breath and this breath spreads throughout the body in the form of oxygen and helps in keeping the body healthy. When this oxygen reaches all the parts of the body and brain, there are many problems that can be cured by it. It repairs the damaged neurons of the body and helps in creating new neurons and the body feels rejuvenate.

Depression: - In a depression, the person's always remains sad and not able to concentrate on any work. He can do his daily routine tasks with great difficulty or feels incapable, hopelessness, helplessness and worthlessness. the person feels a sadness and lacks interest or enjoyment in any activities. It becomes so intense that he does not even adjust his daily routine properly. K. Pilkington, G. Kirkwood, & H. Rampes et al. (2005) found that various yoga interventions, such as pranayama and certain asanas, support the

majority of patients in leading normal, productive lives. Yoga interventions combined with antidepressants also promote mental health and a high quality of life, preventing negative thoughts by improving focus and concentration and bringing clarity to thought process.

Anxiety: - Anxiety. is a normal reaction to stress and can be beneficial in some situation it can be alert us to danger and help us to prepare and pay attention. Anxiety disorder differs from normal feeling of nervousness or anxiousness and involve excessive fear or free-floating anxiety but anxiety disorder is treatable and number of effective treatments are available. In anxiety are some uneasiness and fear in a person. Generally, the word anxiety is defined as a vague and unknowing feeling of fear and apprehension. S. A. Saeed, D. J. Antonacci, & M. Bloch. (2010) reported that regular practices of yoga increase physical and mental strength and reduces anxiety related symptoms. Yoga decreases the anxiety symptoms which is associated with right amygdala. Amygdala is associated with fear and phobia when continuous practise of yoga reduces the anxiety symptoms such as rapid heart rate, shortness of breath, feeling of dizziness, sweating, sleeplessness and restlessness. It is also found that yoga exercise regulates optimal level of Gaba in body which is associated with anxiety factor.

Post traumatic stress disorder: - In PTSD, there are frequent dreams, extreme loss of concentration, feeling of emptiness in front which are experienced by the person after some post matric accident or due to stress like natural disaster, serious accident etc. Bergen-Cico D, Possemato K, & Pigeon W. (2014) reported that who practising yoga for 4 week who suffering from PTSD significantly reduction in its symptoms because due to yoga practise, modulates autonomics regulatory reflex and body and brain feel relax and clam. PTSD are accompanied by physical symptoms such as shortness of breath, rapid heartbeat, tremors, dizziness, and loss of control these symptoms also control by yoga.

Obsessive compulsive disorder: - When a person is unable to control his attention to some specific thoughts or is unable to stop himself from doing a particular action repeatedly, even in his normal activities, it gets tied to a particular thought or topic. Inability to stop thinking is called Obsessive Behaviour. The person suffering from this often considers his thoughts unpleasant and shameful. The need to repeat a behaviour again and again is called Compulsive. Bhat S, Varambally S, & Karmani S, et al. (2016). reported that yoga with pharmacological interventions improved the obsessive thought and compulsive behaviour of the patients.

Mood disorder: - A pattern of illness carried on by an irregular mood is called a mood disorder. Almost all patients with mood disorders go through periods of despair, although they also occasionally experience periods of high mood.

M c Cormick U, Murray B, & M c New B (2015) described that yoga intervention regulated emotions and decrease negative emotions and increase the right brain activity which is helpful for control mood swings in patient. It also increases mental peace and provides clarity of irrational thought.

Schizophrenia: - People who suffer from schizophrenia, a mental illness, develop distorted perceptions, ideas, emotions, and behavior problems, as well as aberrant motor skills. Psychosis, or losing touch with

reality, is a symptom of this illness. Numerous delusions, hallucinations, speech issues, psychomotor issues, aberrant behavior, and negative symptoms like lack of motivation (inability to work or manage family life) are present. According to Duraiswamy G, Thirthalli J, Nagendra HR, et al. (2007), yoga combined with medicine improves both positive and negative symptoms of schizophrenia more.

Stress: - Stress is the body's and mind's reaction to a situation that recurs when people are challenged and need to adapt or adjust in some way. Stress is a complex process that happens in a response of event that disrupt or threatening to disrupt our physical or psychological functioning. R. P. Brown & P. L. Gerbarg, (2005) described that who practising yoga 4 weeks modulates autonomic regulatory reflex and prevents the adrenal gland from producing adrenocorticotropic hormone, which lowers the adrenal gland's production of cortisol and also suppress corticosteroid and significant reduction of cortisol value. When cortisol released in less quantity, it reduces stress relates symptoms and side effects.

What are the impact and benefits of voga on neurocognitive disorders from the perspective of Eastern Psychology.

Yoga and neurocognitive disorder: -: - when cognitive function is the main clinical abnormality. As in the case of Alzheimer's disease, the deficiency is acquired since it represents a decline from the prior condition of cognitive performance. Elnaz, Gorji S & Ali Gorji (2021) found that yoga regular practice improves neurocognitive functions.

Alzheimer disease: - Most elderly people living in nursing homes have Alzheimer's, a degenerative disease that makes up well over half of all dementia cases and slowly rises with age with the symptoms of confusion, withdrawal from social activities, difficulty completing similar task, difficulty solving problem, lack of memory unfounded emotions, poor judgement, trouble with images and difficulty with words. Hassan A, Robinson & M, Willbert (2019) found that yogic breathing is more beneficial effects on Alzheimer disease. Yoga asana prevent and enhance blood flow to area of the brain, improve the neural injury and increase brain plasticity.

Parkinson's disease: - The stooped posture, slow movement, rigidity back and forth (Pill-rolling) tremors and rapid shuffling gait characteristic of Parkinson disease is well known and often obvious. Cherup NP, Strand KL, Lucchi L, & Wooten SV, et al. (2021) reported that yoga meditation and yoga asana improve flexibility, balance, control unnecessary body movement and decrease muscles rigidity and promote strength in Parkinson's patient.

Headache: - Pain in any part of the head is called headache which includes the upper head, face of the skull and the inner part of the head. Headache is one of the most common reasons for which people go to the doctor to get relief from headache. Headache interferes with the ability to perform daily tasks. However, it can be painful and distressing. Headaches can also worsen due to stress, daily hustle and bustle, and lack of rest. Kisan R.K. (2014) reported that yoga (asana, breathing and mediation) enhances blood circulation on the different parts of brain that reduces headache and migraine. In headache brain blood vessel dilates regular yoga practice increase the blood flow and proper oxygen to the different part of brain and reduces headache and migraine.

Epilepsy: - epilepsy is considered here because it is a disorder in the functioning of the brain and therefore an abnormal stress caused by a functional disorder. It may be caused by unknown and wide spread overexcitability of the brain with no structural abnormality that can be detected. epileptic symptoms are result of abnormally increased brain cell excitability detectable by a particular spike and slow wave pattern in the E.E.G of the patient. Epilepsy seizures vary from momentary loss of awareness to convulsions of the whole body. Kanhere SV, Bagadia DR & VD, Mukherjee PS. (2018) reported that regular yoga practice reduces the frequency or duration of EEG and seizure in the patient and improve slow wave pattern and overexcitability of the brain. Yoga interventions increase the blood flow and proper oxygen to the different part of brain and reduces the seizures and regenerate damage neurons.

What are the effect and benefits of yoga on neurotransmitters activity related to psychological disorders and neurocognitive disorders from the perspective of Eastern Psychology.

Yoga and neurotransmitter

There are many disorders are related to the activity of the neurotransmitter. Anxiety disorder is related to low secretion of GABA-aminobutyric acid. Schizophrenia is related to the excess secretion of dopamine and depression is related to the low secretion of serotonin. Serotonin play a major role in mood disorders. Norepinephrine is also link to anxiety. Dopamine, serotonin, endorphins and oxytocin, these four neurotransmitters increase happiness in a person. Newberg AB, Iversen J. (2003). found that practise of yoga, a person can reduce or increase secretion of neurotransmitters, so that improvement can be seen in the all over health.

Dopamine: - dopamine is also called feel good hormone. It is an important part of brains reward system. It is associated with pleasure feeling along with memory, learning. This neurotransmitter is linked to mood, the brain's reward systems, voluntary movement regulation, and an overabundance of dopamine in the frontal lobe, all of which are linked to schizophrenia. Parkinson's disease is a neurological disorder characterized by the loss of dopaminergic neurons in the substantia nigra, which are responsible for producing the neurotransmitter dopamine. Schizophrenia is related to the excess secretion of dopamine and low secretion leads to Parkinsons disease. Newberg AB, Iversen J. (2003). reported that yoga regular practise releases dopamine in a certain quantity which helps in reduces Schizophrenia and Parkinsons disease symptoms.

Serotonin: A neurotransmitter that plays a role in the feeling of pain, appetite, and sleep. Additionally, serotonin affects cognitive processes including memory and learning as well as activity levels. Numerous antidepressant drugs prevent serotonin from being reabsorbed, making more of it available to the receptor in the synapses and causing an increase. Disorder of mood and depression are related to the low secretion of serotonin. Newberg AB, Iversen J. (2003). reported that due to yoga practise tremendous changes in

serotonin level. Regular practice of yoga, serotonin start getting released in appropriate quantity and block the reuptake of serotonin.

Acetylcholine: - It contributes to communication between motor and sensory neurons and is crucial for muscle stimulation. Additionally, it is crucial for memory, alertness, and concentration. It also contributes to RAM sleep, and Alzheimer's disease is linked to the development of acetylcholine depletion.yoga practise tremendous changes in acetylcholine level. Mehta UM, Gangadhar BN. (2019), reported that due to regular practice of yoga, acetylcholine start getting released in appropriate quantity and reduces the symptoms of Alzheimer's, and improves attention, arousal, memory and REM sleep.

Norepinephrine: - This excitation neurotransmitter, also referred to as noradrenaline, stimulates the sympathetic nervous system, influences mood, arousal, and alertness, and is involved in learning, memory, sleep, and emotions. Low norepinephrine levels have been associated with depressive illnesses, whereas high levels have been associated with anxiety. Mehta UM, Gangadhar BN. (2019) found that regular practice of yoga interventions released appropriate amount of norepinephrine decreased the symptoms of anxiety and depression and improved arousal, vigilance, regulate mood, it also improved learning, memory, sleep and emotions.

GABA-aminobutyric acid: - anxiety disorder is related to low secretion of GABA- Aminobutyric acid. The brain's most prevalent inhibitory neurotransmitter, GABA, lowers the activity of the neurons it attaches to. It lowers alertness and is linked to sleep. Both epilepsy and eating problems have been linked to abnormal levels. Beart PM (2020) reports that practice of yoga regulates the Gaba and improves anxiety disorder, sleep and maintain optimal level of arousal.

Conclusion

The present study considered that yoga has the potential to enhance overall health and psychological wellbeing. It increases self-efficacy and self-confidence, gives people a lifetime skill, and is frequently linked to other beneficial results. Yoga has been significantly proven to control stress, depression, psychological disorder and neurocognitive disorder. Yoga also improves neurotransmitter secretion amount. Further research is encouraged to fully understand the benefits of incorporating yoga into holistic health and wellness practices.

Recommendations

- In yoga, the effects of asanas, pranayama and meditation in yoga should be studied separately and their effect on psychological disorders and wellbeing should be studied.
- There is a lack of psychological studies in yoga and at the same time the samples taken are very less, hence the sample size should be a large so that its effect can be seen clearly.
- In all the studies related to the yoga, some alternative therapy or medicines have been used along with it, but there should be research only on yoga to find out the positive effect of yoga on mental illnesses.

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