

# Yoga and Spirituality in Mental Health: Illness to Wellness

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It is my privilege and honor to give the presidential address today on this 52nd Annual Conference of South Zone of Indian Psychiatric Society (IPSOCON). It is a great opportunity and a humble experience to put forth my views and give a direction to the society in the presence of Dr P Ragurami Reddy, my beloved teacher and Dr BN Gangadhar, a guide in my journey of yoga, both of whom are the light houses of my vision. I have the privilege of sharing the ideas from the deeper layers of my soul with the members, teachers, and students of five states of South India in the historical and tourist city of Coorg in the state of Karnataka. The ideas which have been shaped into my present address with the title, “Yoga and Spirituality in Mental Health: Illness to Wellness” is rooted from the essence of my life experiences, and experiences with psychiatric patients in my hospital with a follow-up data of 69,000 patients. This has given me a lot of insights that helped to conceptualize today’s topic. During the past 15 years, I have travelled around the world, observed various institutions for mental health, and attended several conferences and annual meetings of the World Psychiatric Association, American Psychiatric Association, the Royal Col-

lege, and the European Psychiatric Association. The experience I have gained over these years, along with running a wellness clinic with ongoing commitment to rehabilitation and psychotherapy, has made me choose the topic “Yoga and Spirituality in Mental Health: From Illness to Wellness.” It happens to be my life’s dream, mission, and aim to enrich patient care in everyday clinical and psychotherapy practice.<sup>1</sup> With great humility, I would like to share my thoughts on this concept and seek blessings from the eminent seniors and scholarly members of Indian Psychiatric Society (IPS).

## Concept of Complete Health

### Concept of Health: Body–Mind Continuum

The word “Health” comes from “Heal” and “Thy” (self), that is, healing the self. As doctors, being the healers of the self, we must know what constitutes the self. Two types of self are commonly considered:

1. The self that is ego, also known as the learned superficial self of the body, mind, and social self; an egoic creation.
2. The true self, the spiritual self, the observing self, or the witnessing self.

Let us now understand the self and its dimensions, so that we can understand the dimensions of health. As practicing doctors, we may believe that we are the healers of the body (body-self). We do not consider the mind and psychiatry as a part of the undergraduate medical education. We are further fragmented into different super-specialists of the body such as cardiologist, pulmonologist, gastroenterologist, and neurologist, by attaining expertise in the individual systems with relative negligence of the “totality of the self of the patient.”

WHO defines health as, “The state of complete physical, mental and social well-being of an individual and not merely the absence of disease or infirmity.”<sup>2,3</sup> The well-being of people is the goal of health systems according to this definition. Being behavioral experts, we know how mind is shaping, how mind is disrupted, and the different approaches used by pharmacological and nonpharmacological means to correct this disturbed mind.

The psychiatrist today makes every effort to treat people who are mentally ill and bring them from extreme illness to near-normal condition. We also seek to take advantage of recent psychiat-

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ric developments to prevent illness at primary, secondary, and tertiary levels including rehabilitation and wellness promotion.

## Concept of Illness and Wellness

In 1975, Dr Travis opened the Wellness Resource Center (Mill Valley, CA), the first wellness center in the United States. He developed an innovative personal lifestyle program that focused on self-responsibility and engaged the entire person: body, mind, emotions, and spirit.<sup>4</sup>

The illness to the wellness dimension is a continuum that extends from extreme illness to extreme wellness.

## Illness–Wellness Continuum

Wellness is a process that is ongoing and never static. The continuum of illness–wellness was first envisioned by John in 1972 and was published in 1975.<sup>4</sup> Moving down from the center shows gradually deteriorating health. Moving from the center to the top means that health and well-being are increasing. You can reach a neutral point where symptoms of disease are alleviated by your treatment paradigm (pharmacotherapy and psychotherapy). The paradigm of the wellness, which can be used at any point on the continuum, helps you move to higher wellness levels. This lifestyle model takes you beyond neutrality and assists you as far as you can to the top. It is not intended to replace, but to work in harmony with, the treatment paradigm on the upside of the continuum. When the individual is ill, it is important to treat but not stop at the neutral position. Use the wellness paradigm to move towards the high-level wellness.

Most of us assume that wellness means absence of illness. In fact, there are many levels of wellness, as there are many levels of illness. The illness–wellness continuum shows the relationship between the paradigm of treatment and the paradigm of wellness. An individual may step beyond the “neutral” point to an even higher level of wellness. Sweeney and Witmer<sup>5</sup> proposed a broad concept of “wellness” as “a way of life oriented towards an optimal health and well-being that integrates the individual’s body, mind and spirit so

as to live life more fully in the human and natural community.” “Illness” is defined as a highly personal state in which the physical, emotional, intellectual, social, developmental, or spiritual functioning of a person is diminished. This is not a synonym for the disease.

## Doctor–Patient Relationship: Empathy Being—“Well-Being and Ill-Being”

The relationship between doctor and patient is a therapeutic relationship, it is the means by which the doctor and patient hope to engage with each other and bring beneficial changes in the patient. Empathy plays an important role in the therapeutic relationship; it has various definitions which include a wide range of emotional states, including caring for and wanting to help other people and experiencing emotions, as if putting one’s feet in the patient’s (client) shoe. It is also being able to understand and express other people’s emotions. The fundamental capacity to perceive emotions is likely inherent but with varying degrees of intensity and accuracy which can be cultivated and achieved. Some can adequately develop their empathy to an altruistic level where the doctor evolves into the God. This level probably equals to a *vaidyo narayano hari*, a well-known Indian saying. At this highest level, a doctor can see, the “being” in every being, whether human or animal, irrespective of their illness or wellness domain. The purpose of doctor–patient consultation is not mere diagnosis of disease or disorder, but to diagnose the level of being, whether in normal, or in what level of illness and in what level of wellness. In this regard, I wish to give a few quotations:

“BEING” links one’s sense of one’s body to one’s perception of world. (Martin Heidegger)<sup>6</sup>

“WELL BEING” is the individual experience as well as contentment, satisfaction of the past, optimism for the future and happiness in the present. (According to MCNULTY-012)<sup>7</sup>

Ill-being—a condition of being deficient in health, happiness or prosperity.

## Bio-Psycho-Socio-Spiritual Dimension

Spirituality is at the top of the triangle in the modern approach to a bio-psycho-socio-spiritual school of mental health and has a bidirectional impact on the functioning of all other domains.<sup>8</sup> The spiritual level has a distinctive human character and is associated with the development of prefrontal cortex, reticular activating system and the consciousness or awareness of self.

The modern concept of spirituality<sup>9</sup> is “The quest for the true meaning of life through religious involvement and belief in God, family, nature, rationalism, humanism and the arts.” All of these factors can influence the health of the patient, both in illness and wellness, by interacting with each other.

## Concept of Global View

The newer emerging dimension in the psychotherapy and non-pharmacological interventions is the concept of global view.<sup>10</sup> The success/failure of intervention depends on the global view of clinician/client. The people of the world are divided into three groups:

1. Religious and God believing persons: Hindus, Muslims, Christians
2. Religious and non-God believing persons: Jains, Buddhists
3. Non-religious non-God believing persons: Communists, Rationalists

Every person has his own world view, which varies according to his/her age and maturity and this can be assessed by the clinician. Psychotherapy is aimed at fostering healthy personality growth and development through enhancing mental resilience and strengthening a person’s global view through removing, modifying, or retarding current symptoms by mediating dysfunctional behavior patterns in the illness domain.

## Yoga and Spirituality

The United Nations and world community has acknowledged our Indian National Wisdom, “Yoga” by announcing “June 21” as the International Yoga Day. The word Yoga means “union,” that is, the union of cosmic consciousness with one’s own personal consciousness. Yoga

helps a person grow from “I” to “We,” that is, from being self-centred to a global human being.<sup>1</sup> The “union” could also mean, for a psychiatrist, the unification of thought and affect as well as mind and body, which may have therapeutic value in both illness and wellness domains.

Yoga is a systematic, scientific method with a spiritually approaching practice to help the human consciousness (self) to get command over the mind and body (*prakriti*) to get coherence between the self and mind–body complex.

By practicing yoga, human being (self) can achieve highest coordination with the mind and body. By the practice of yoga, the person not only gets coherence at individual level (“I”—the limited self) but also one would get coherence with the world citizens irrespective of caste, creed, language, nationality, race, religion, thereby an individual evolves from “I” to “WE.”<sup>1</sup>

Yoga is a method given by ancient Rishis to human race which refers to one of India’s wisdom tradition, used for millions of years to study, explain, and experience the mysteries of mind and human nature.

It is not a religion but an experiential philosophy and spiritual procedures of *sanatana dharma* (eternal duty/dharma) using the symbols and metaphors which originated in the Indian subcontinent. Yoga is a way of life spiritually transcending all religions. It can be practiced by any person, belonging to any religion or belief system, to improve one’s fitness to practice one’s own religion by increasing neurobiological fitness to the maximum. This facilitates the individual to become a spiritual human being. Yoga is applied successfully in different psychiatric disorders around the world, and several studies published in well-established journals report promising results in the last three decades. These significant scientific and statistical evidences are forcing the scientists of mind, that is, psychiatrists and other mental health professionals to pay attention to this evidence and encourage them to integrate yoga and spirituality in mental health services in both *illness* and *wellness*. For all practical reasons, yoga and spirituality is put in use by several psychiatrists taking into consideration its recognized benefits in promoting

good health by its effects on the mind and therapeutic role in alleviating the symptoms by neurobiological changes.<sup>11</sup>

Yoga has been widely used as an intervention along with conventional therapies and also exclusively in less severe to severe mental illness. While the exact mechanisms of yoga are not fully understood for modulating these therapeutic and biological effects, certain findings are relevant. Yoga involves imitating the therapist’s movements and postures during the learning process. This practice will promote mirror neuron activity that is involved in social cognition.<sup>12</sup> Yoga practice typically involves being mindful while performing asanas. In traditional ashtanga yoga, mindfulness is illustrated as dharana and dhyana. Practices of mindfulness showed positive effects on neuroplasticity and increased the density of grey matter.<sup>13</sup>

The cognitive benefits of yoga can be explained by the neuroplastic effect.

## Yoga in Neurotic Disorders

The positive benefits of yoga and spirituality have been extensively investigated and demonstrated among areas of various milder forms of mental illness, anxiety, and depression. Yoga reduces stress and is part of several stress management packages.<sup>14</sup> The practice of hatha yoga decreases body weight, and improves the pattern of the respiratory function, decreases the respiratory rate, increases the expansion of the chest, increases vital capacity, increases breathe holding time, and also increases the resistance to physical stress.<sup>15</sup> Sat Bir. S. Khalsa in his article on yoga views that the yoga is becoming therapeutic in various psychiatric conditions such as depression and anxiety, other medical conditions of cardiovascular origin such as hypertension and heart disease, and respiratory illness such as asthma and diabetes.<sup>16</sup> N. Hartfiel et al. published a paper on yoga’s role in increasing levels of psychological well-being by reducing perceived stress and back-pain and increasing work performance.<sup>17</sup> Subhadra Evans, PhD, published a paper on yoga and proved its capacity to cure chronic pain conditions.<sup>18</sup> A number of research studies have shown down regulation of the hypothalamic–pituitary–adrenal (HPA) axis and the

sympathetic nervous system (SNS), and reinforce the theory that yoga practice increases physical and mental well-being, resulting in tremendous health benefits.<sup>19</sup> Pete Arambula et al., in their study, argued that there is more alpha-EEG activity in occipito-parietal areas and increased skin conductance level during meditation.<sup>20</sup>

Yoga has proven its benefits in anxiety, not only in the nonclinical population but also in the clinical population.<sup>21</sup> G Kirkwood et al. published the positive results in the anxiety disorders like specific anxiety disorders especially in OCD.<sup>21</sup> Obsessive compulsive disorder was treated with kundalini yoga, and the results were promising.<sup>22</sup>

Recent reports suggest that yoga has been successful in reducing functional pain in somatoform disorders.<sup>23</sup> Sudarshan kriya yoga (SKY) programme by yogic breathing treatment is giving positive results in stress management, anxiety disorders, PTSD, depression, in management of war victims and victims of natural disasters.<sup>24</sup>

## Yoga in Mood Disorders

Specific forms of yogasanas, such as sudarshan kriya and sahaja yoga, have been tested with positive findings for depression management.<sup>25,26</sup> Studies with different clinical outcomes suggest that patients have benefited from a reduction in depression scores following yoga. Such studies were inspired by the finding that yoga led to a sense of well-being and decreased dysphoria in psychologically stable participants. Yoga was almost as effective as an anti-depressant drug (imipramine) by randomized comparison.<sup>27</sup> Yogasana-based therapy alone too reduced depression to remission levels.<sup>27</sup> These therapeutic effects are also linked to changes in some biomarkers. Smaller amplitudes in the event-related potential (P300) suggest lowered mentation in depression. Following 3 months of therapy with yoga as a sole intervention, this physiological marker was “normalized” to a higher value in depressed patients.<sup>28</sup> Yoga therapy improved serum levels of brain-derived neurotrophic factor (BDNF) in depressed patients who, as a group, had lower levels of the BDNF. Interestingly, BDNF response has also been

correlated with the therapeutic effects of antidepressant drugs and electroconvulsive therapy. These biological effects, as mentioned above, correlated with the antidepressant effects of yoga.<sup>29</sup> Cortisol-reducing properties of yoga indicate attenuation of the HPA axis, which in depression and other stress-related states is otherwise overactive.<sup>29</sup>

Magnetic resonance spectroscopy (MRS) of the brain shows elevated gamma-aminobutyric acid (GABA) levels after an active yoga session.<sup>30</sup> GABAergic medications are known to have mood-stabilizing effects. This could be yet another yoga mechanism explaining therapeutic effects in depression and anxiety. One of the yoga procedures includes chanting “OM.” From functional magnetic resonance imaging studies, there is some evidence that chanting OM is known to deactivate those brain regions (implied in emotions) probably through vagal afferent stimulation.<sup>31</sup>

Vagal nerve stimulation is used in depression as an invasive treatment. VK Sharma et al. conducted a study of sahaja yoga in depressive disorders and found that HAM-A and HAM-D scores were significantly improved in patients with sahaja yoga.<sup>32</sup> Streeter et al., concluded that the brain GABA level increases in experienced yoga practitioners after a yoga session. This indicates that yoga practice should be investigated as a therapy for conditions with reduced levels of GABA such as depression and anxiety disorders. Yoga increases GABA levels.<sup>33</sup> At the Annual Conference of the Indian Psychological Society, Andhra Pradesh division at Kurnool, I presented a paper entitled “Psychotherapy for mood problems using ‘Mrityunjaya technique’ (biopsychosocio spiritual approach).”<sup>34</sup> Mrityunjaya mantra (mantra yoga) helps the client to live separately from negative and positive emotions and thoughts thereby aiding clients to battle depression and mania. The therapist empowers the client to deal with the mind that is full of negative or positive thoughts and emotions in a clever manner. Here, the client becomes conscious of how the self attaches to the negative thoughts and emotions that lead to depression. One detaches from these and escapes from depression. The client also under-

stands how the self attaches to positive thoughts and emotions that cause mania like states from which he can escape if he detaches himself. By self-awareness, the client obtains the ability to handle the mind through fine tuning with the relative attachment or detachment.

## Yoga in Psychotic Disorders

Well-conducted clinical trials have confirmed the benefits of yoga when added to ongoing antipsychotic therapy in stabilized outpatients of schizophrenia. The benefits of yoga over the disorder's cognitive and emotional symptoms are noteworthy.<sup>35,36</sup> These symptoms were implicated in the functional outcome of patients with schizophrenia. These promising findings of yoga in schizophrenia led to an international guideline for recommending yoga in schizophrenia treatment along with antipsychotics.<sup>37</sup> The persistent nature of this disease imposes demands on the caregivers subjecting them to stress and burden. In patients with schizophrenia, yogasana-based therapy raised oxytocin levels and enhanced social cognition.<sup>38</sup> Oxytocin is known to be associated with social cognition and is now being tested as an intranasal spray to benefit those disorders with compromised social cognition.<sup>39</sup>

Vancampfort, in his study of yoga in schizophrenia, indicated that yoga therapy can be beneficial as an add-on treatment to reduce general psychopathology, positive and negative symptoms in schizophrenia patients stabilized on antipsychotics.<sup>40</sup> I presented a paper entitled “Psychotherapy for psychotic disorders by using Gayatri mantra” (mantra yoga) (biopsychosocio spiritual approach)” at the World Congress of Society for psychosocial rehabilitation held at Bangalore.<sup>41</sup> Through this approach the person gets the right self and non-self orientation, and the correct time, place, and person orientation (i.e., who is the true self). The proper personal orientation will aid the client to know what is self and non-self. The client becomes aware about the relation between real self-mind and knows that self is the owner of the mind. The client learns to handle the mind with proper orientation. He develops the ability to align all the fragmented, suppressed, encrypted

memories with the present moment and can witness the whole without distortion of reality.

By witnessing the totality of truth, his abstract thinking, judgment, and insight will improve. His thought, mood, and behavior become congruent. The negative symptoms of schizophrenia disappear when the emotional component becomes congruent with thought and behavior, and the client may progress to the normal domain of cognition and behavior.

## Yoga in Substance Abuse

Although there is no conclusive evidence of yoga helping drug/alcohol-dependent patients to stay abstinent, research shows that symptoms of depression during withdrawal in alcohol-dependent subjects are better reduced if a yoga practice is added during such an acute detoxification programme.<sup>42</sup> Yoga also decreased cortisol levels in subjects undergoing detoxification for alcohol dependence as well as subjects with depressive disorder.<sup>42,29</sup> A human being fulfills his existential desire to be happy through substance. In my clinic, I utilize the spiritual principle of existential *ananda* (happiness) which is innate in human being. The therapist can use the principle of the existential happiness by *sukha prap-ti*; *dukha nivritti*—a vedic saying, meaning gaining happiness and comforts leads to removal of sorrow. Training the client to get *sukha* from within by this technique reduces the desire for substance, which leads the client to *dukha nivritti* and also to society.<sup>1</sup>

## Yoga and Spirituality in Wellness

Yoga has also been found to be effective in a randomized study in helping caregivers of patients with schizophrenia.<sup>43</sup> Few studies have documented the role of yoga in conditions such as attention-deficit hyperkinetic disorder and autism.<sup>44,45</sup> Chronic back pain can be treated with yoga, a condition for which psychiatric intervention is often sought. An analysis on this topic supports the role of yoga.<sup>46</sup> Improvement in sleep, function, and quality of life in elderly subjects with minimal cognitive impairment (MCI) is noted following yoga practice.<sup>47,48</sup> MCI is well known to be

a precursor of later dementia. Can yoga delay dementia onset when it is used as a lifestyle package for the elderly? Well-planned longitudinal studies are required to compare yoga with adequate control. Human beings are fragmented into caste, religion, ethnicity, nationality, region, language identities, and are unable to evolve into the domain of extreme well-being. This results in relatively delusional and distorted identity. Gayatri Mantra (mantra yoga) can be used for wellness, which raises awareness and broadens the complexities of relatively narrow identities to global human identities, that is, to evolve from “I” to “We.” The traditional practice of “upanayana” in India is intended to open up insights (additional eye or sight) and enable human beings to grow into extreme wellness. This raises awareness of the nature of restricted human identity, to evolve in thought process from lower selfish level (“swakalyana”) to higher mature selfless level (“lokakalyana”) in the domain of wellness.<sup>1</sup>

Today’s civilization divides the world into negative and positive dichotomies. In the domain of emotional wellness, individuals naturally try to evolve and develop balanced emotions of relatively positive and negative thoughts. The “Mrityunjaya Mantra” (mantra yoga) helps the client to understand the world’s dichotomy and relatively positive and negative emotions associated with that. The client learns to live without polarizing emotions, so that he does not become a victim of the mind, but a master of balancing this mental dichotomy. This helps the human being to grow into an extreme wellness in the emotional domain.<sup>1</sup>

## Stress Theory—Wellness

“Stress” can be defined as a condition that disturbs or is likely to disrupt a person’s normal psychological or physiological functioning. Stress is described by the body as something (real, physical, or imagined) that threatens the life of a person, putting into practice a sequence of reactions that seek to reduce the impact of stress and restore homeostasis.

## Stress/Distress–Disease/ Disorder

“Acute-chronic stress versus wellness”

Various neurotransmitters respond to stress. Stress causes release of catecholamine through locus coeruleus and autonomic nervous system by the activation of noradrenergic neurons of the brain. In response to stressors, increased serotonin production has been documented in the serotonergic systems of the brain and also increased dopaminergic neurotransmission in the mesofrontal pathways. Stress not only brings about changes in the neurotransmitter system but also in the endocrine and immune system. ACTH is released from the anterior pituitary in response to CRF secreted from the hypothalamus. The adrenal cortex is in turn stimulated by ACTH which leads to the synthesis and release of glucocorticoids. The immune functioning is inhibited by glucocorticoids. Stress may also lead to immune activation through a variety of pathways, such as the release of humoral immune factors (cytokines) and interleukins. Human biology/physiology, behavior, emotional and cognitive process are also influenced by stress. Stress and negative emotion will decrease the human cognition by increasing the volume of amygdala and decreasing the volume of hippocampus, causing changes in behavior (established in rat and human experiments). Hippocampus and the HPA axis are involved in feedback regulation of cortisol, which is the body’s primary stress hormone. Epinephrine/norepinephrine release is regulated by locus coeruleus, amygdala, adrenal gland, and the SNS. Stress modulates the synaptic plasticity in the hippocampus. Specific cognitive deficits in spatial learning and memory are seen due to the effect of chronic stress on structural synaptic plasticity which causes atrophy of apical dendrites in pyramidal hippocampal neurons. Ultrastructural changes reported as a result of acute and repeated stress are decreased expression of BDNF. Yoga and spirituality is the way of stress-free life. It trains us in how to live without stress and develop better coping mechanisms. Therefore, it has preventive value in both physical diseases of body and psychological disorders of human being. This is the basis of “Ashramam life.” In India, under guidance of gurus in various ashrams, the lifestyle without *shrama*, effortless way of living, is followed which

is the key factor of Himalayan wellness. Indian stress-free living which is the tradition of ancient Indian culture has been practiced in India for decades.

## Review of Mental Health Concepts of West and East

Using yoga and spirituality as the basis, the psychotherapy which I practice in my wellness clinic is *self-analysis* instead of *psychoanalysis* utilizing all the Indian archetypal symbols and psychotherapeutic psychiatric modules of the west. Couch technique was used by Freud for *psychoanalysis*. In this technique, all the material from the client is received by the psychoanalyst, giving him the motherly security. Later the therapist acts like a father and analyses the defensive mechanisms, such as repressions and suppressions from the data collected (data of mind and information of life). In fatherly terms, psychopathological interpretation provides the client with guidance and corrective measures. We train the client to sit in silence in order to *self-analyze* and see his mind (the mind is the image of the mother figure, i.e., *prakriti*). A seer (rishi) sees the generation of mind, by observing and analyzing it like a father. Like a witness, he sees how the seer operates the mind that has witnessed the proceedings of life. Through observation, the seer (self) gets the cleverness to understand the distortions of the mind, the emotional-affective ties between the mind and self, which he learns from seeing the self being taken away by the mind. The self then learns how to cleverly handle the mind by detaching the mind and self. Like a father (*purusha*), the self (seer) tries to understand the mind’s limitations and, with masterly cleverness, guides it.

According to the Indian mythology, in the *war of Kurukshetra*, Arjuna can be regarded as “the ego,” Krishna “the superego—guru,” horses “the id,” chariot the representation of body, the Pandavas as “good,” and Kauravas as “bad,” and Hanuman sitting above the chariot simply witnesses how the superego (i.e., Krishna) mentors the ego (i.e., Arjuna), controls the id (i.e., horses), the good (Pandavas) and the bad (Kauravas) and hence gains insights. This war is, I think, a symbolic representation of war in mind.

## Barbareeka's Way of Seeing with Nobodiness (No-Body-Ness)

FIGURE 1:

### Barbareeka's Way of Seeing with Nobodiness (No-Body-Ness)



The great secret of the Kurukshetra war was that Barbareeka, who was son of Ghatotkacha (son of Bheema) observed the whole war (silently seeing from the top of the hill). Lord Krishna graciously allowed Barbareeka to see (witness) the entire Kurukshetra *sangram* with just his head by sacrificing his body (Figure 1). At the end of the Kurukshetra war, which is symbolic of life war (*jeevan sangram*), the truth of life is highlighted and received by Vyasamaharshi, Krishna, and Pandavas at the end/climax of the Mahabharata; Barbareeka gave the judgment with nobodiness. This symbolically suggests that “the truth of life” can be seen (witnessed) by the human race and therapists like us without distortion of reality, which is the ultimate truth of life by selfless observation/no-body-ness in the highest wellness domain.

## Sheshashayana Vishnu— with Garuda

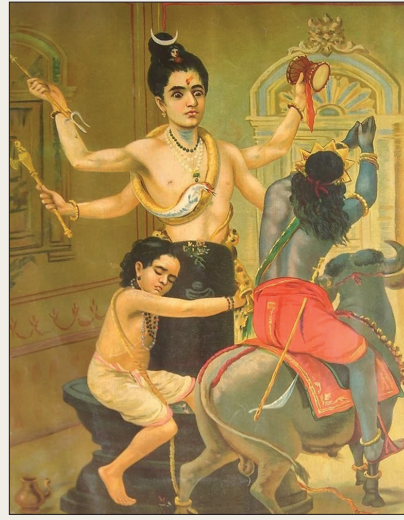
In Sanskrit, “snake” means Nagu (na+agu = aganidhi [doesn't stop]) which means it is in constant motion symbolizing the “mind.” Lord Vishnu symbolizes the self and lies peacefully on the snake with Garuda on top watching it quietly. Snake can be used as a comfortable bed and umbrella if controlled properly. The same snake (mind) will bite you if you are not careful.

## Markandeyan Phenomenon

In the Indian mythology, “Bhaktha Markandeyan” was born with a life span of

FIGURE 2:

### Markandeyan Phenomenon



12 years at birth (biological birth) which was changed by spiritual means to immortality because of his virtue (i.e., spiritual birth) (Figure 2). “*Dvija*” the second birth gives a symbolic message, and this is the basic evidence for the practice of yoga and spirituality. This suggests that biology can be changed by spiritual practice. Rishi Markandeyan discovered Mrityunjaya sloka from the vedas, the second greatest mantra given by adiyogi (Shiva). This sloka is beneficial in counselling and psychotherapy and has been successfully used in treatment of mood disorders.<sup>1</sup>

## Trikala Sandhya—Dasha Dik-Namaskara “Praying GOD as Dik-Shakthi in Surya Mandala”

Indians consider *sandhya* as a sacred time to pray the almighty, especially by the persons from orthodox families who underwent *upanayana* ceremony—they strictly follow it. If any person belonging to any creed does his choice of prayer at that particular time, that is called *sandhya* for that particular person. If he does his choice of prayer for three times that will become *trikala sandhya* for him according to scholars of the Indian philosophy.

Praying to the 10 sides of space—*dasha dikkulu* (*Turpu, Agneya, Dakshina, Nairuti, Pascima, Vayuvyam, Uttara, Ishanya, Urdva, Adhah*) an ancient way of prayer in India. It is nothing but praying space which will increase the mind space and spatial

orientation of mind. In *trikala sandhya*, there is an increase in the orientation to time, place (space), and person. Praying the *prakriti* and *dik-shakthi* in *suryamandala* is common to all cults in India. It never contradicts with any person or any type of belief system, whether he is God believer, or non-God believer (who believes nature [*prakriti*] to be the power).

## Outer World–Inner World

### Sight–Insight

#### Rishi–Muni

The *world outside us* is a reflection of the *world inside us*. Mood is a pervasive and sustained emotion that colors a person's perception of the world. This definition signifies what we see *inside*, we feel as if it is from *outside*. Hence if we start concentrating on our own emotions, balancing ourselves, being contended, accepting, and loving ourselves the way we are, it will automatically be reflected in our behavior towards others and we will accept them the way they are.

Balancing the life can be made possible by accessing one of the individual's greatest resources—awareness, empathy, and insightfulness which will help one find an individual's true self. By this the individual constantly grows and evolves from “I” to “We.” According to Ramana Maharshi, the “I” is nothing but a “bhava” which may be limited either to self (narrow self) or unlimited that is evolving to we, an infinite self (*ekath-matha bhava*).

Rishi/Muni: If the client was trained to observe with *Mouna* (mouni), he becomes muni, and then he can see properly in a relatively right way of seeing the things like seers (rishi).

## Chidambara Rahasya— Tripura Rahasya

*Chith* is mind, *Ambara* is sky (space); mind and memories are stored in mind space (*chidakasa*). This is the secret of Indian spiritual saying known as *Chidambara Rahasya*.

*Tripura Rahasya* is nothing but the memories of past, present, and future worlds of a particular person. The *trikala sandhya* with help of *dasha dik-namaskara* help to increase a person's mind space to the maximum possible limit as he is praying to an external infinite space. It

will be therapeutic for him if the client does this with mindfulness of infinite external space. The problem of human being essentially is either the space problem (infinite self) or the attachment of mind with the self. The purpose of yoga is to train the person to increase the internal space with mindfulness and learn to live without attachment.

### Prakriti/Vikriti/Samskriti

Yoga or any mantra yoga when practiced in *prakriti* with mindfulness will decrease the *vikriti* (psychopathology) of our mind. All the yogic postures, Gayatri or Mrityunjaya mantras have come from our *samskriti* (culture). It is the heritage of Indian rishi *samskriti*, which is known as “sanatana dharma.”

### Childlike Seeing—Pruning

Indian rishis have told us how to decondition and go to a childlike stage to see one’s mind with an undistorted self-image (fact without fictions).

“Pruning”: In a child’s brain, all parts are well connected with one another. As we grow, because of pruning, the connectivity is decreased and we become more conditioned with all good and bad effects of our so-called civilized life, and thus our judgment gets subjected to all these conditionings. By yoga and spirituality, the unlearning of all ill effects of civilization occur. This leads to reshaping of synapses, and neurogenesis takes place. As a result we can protect our evolutionary thinking by preventing neurological regression.<sup>49</sup>

### “Integrated Salience, Default, Cognitive Executive Networks”

*“Integration of Cognition, Action, and Emotion”*

The human brain consists of numerous distinct and interactive networks. The latest evidence from these networks has provided a systematic framework to understand the basic aspects of human brain organization and function of mind in normal and abnormal states.

Dynamic interaction between salience network and other brain networks with dynamic switching depends

upon the different states of mind. The salience network plays an important role in switching dynamically between the default mode and central executive networks. In order to maintain cognitive set-up and manipulate information in working memory while suppressing the default network, the central executive network and task control regions are recruited by the salience network to focus attention on task-related objectives. In the human brain, the salience network is located at the interface between the cognitive, affective, homeostatic, and motivational systems. It plays a key role in identifying the most biologically and cognitively relevant external and endogenous stimuli to guide behavior. The salience network with the “Anterior Insula” as its dynamic hub contributes to a variety of complex brain functions by integrating cognitive, emotional, and sensory information. This will help us to understand the role of these important networks in the functioning of the mind in both illness and wellness.<sup>50</sup>

### Concept of Vasudaika Kutumbam—Shiva (Yogeshwara—Nataraja—Adiyogi) Family

Our ancient rishis have given the world a message in a symbolic way to exist as a single big family (one world—Shiva family—Shivaphrenia) irrespective of mutual differences and conditionings by seeing a being in every being.

### Review of the Work Done by Our Great Sons of East (Indians) in the West

#### Wisdom and Successful Aging

According to Dr Dilip V Jeste, beloved son of India (from Bombay) who settled in California, the expected age of a human is 120 years (which is reported in literature), whereas American expected age is around 80 years; there is a gap of 40 years. In India it is around 68 years. According to him, the components of wisdom are emotional regulation, social cognition and social cooperation, in-

sight, value relativism, tolerance of ambiguity and diversity, openness to new experiences, resilience, humor, and successful coping strategies. Wisdom is not knowledge—but experiential knowledge. With age memory can decrease but wisdom improves.

#### Neurobiology of wisdom<sup>51</sup>

Proverbial father—Dorso-Lateral Prefrontal Cortex (dlPFC).

Proverbial mother—Ventral-Medial Prefrontal cortex (vmPFC).

Proverbial uncle/teacher/guru—Anterior Cingulate Cortex (ACC).

Proverbial friends—Limbic Striatum.

#### Neurobiology of successful aging<sup>53</sup>

with help of juggling exercise<sup>52</sup> which induces change in grey matter, we can classify the persons into three Successful young—Unilateral usage of brain areas.

Unsuccessful old—Unilateral usage of brain areas.

Successful old—Bilateral usage of brain areas.

This wisdom science should become the basis of our future wellness interventions.

### Phantoms in Brain—V.S. Ramchandran

“Phantom limb” pain is caused by learned paralysis and by new synapses formed in the somatosensory area of limb in the brain. This protracted pain and cramps in phantom limb is cured by visual feedback of symmetrical clapping movements in the mirror box technique. The cramps in phantom limb had disappeared due to unlearning of learned paralysis which promotes reorientation of synapses in somatosensory area of limb. With the mirror box technique, he explained how a learned behavior can be unlearned and he successfully amputated the phantom limb for first time in the history of medicine. This was confirmed in double blind placebo-controlled studies and is successfully being used in pain clinics and early neurorehabilitation of limb paralysis, chronic pains, and complex regional pain syndrome with good results.<sup>54,55</sup>

Here, I want to mention regarding mirror neurons. In 1980s, an Italian scientist Rizzolatti discovered mirror neuron system. There are three types of mirror neu-

rons, that is motor, sensory, and empathy mirror neurons. Mirror neurons has a role in a lot of therapeutic applications.

## Rubber Hand Illusion Experiment

This is a kind of illusion where the sensation that a rubber hand belongs to one's own body is induced by stroking the participants' own occluded hand with a visible rubber hand.<sup>56</sup> The same experiment can be done by tapping on table; after some time, the person feels sensations emerging from the table. The galvanic skin responses can also be felt by stimulating the table. This has a lot of implications on the concept of self and non-self, philosophy of self, and existence of self. His explanations about art, creativity, morality, and civilization have a lot of implications on our understanding of mind functioning in illness and wellness.<sup>57</sup>

We have to use yoga, spirituality and eastern archetypes, eastern wisdom and western science, and latest scientific modules with the spirit of Dilip V Jeste and VS Ramachandran, as most of the distortions of psychiatric patients and so-called normal clients may be psychological phantoms in brain and are illusions like rubber hand illusionary thinkings. We should incorporate these concepts in the therapeutic process in the disorders to enhance the therapeutic effects.

In summary, psychiatrists use these available and emerging resources, yoga, and spirituality as a potential therapeutic intervention. There is a need to test yoga therapy further systematically in multicenter trials and incorporate yoga into clinical practice. In the days ahead, therapist trained in yoga and spirituality could become a very valuable part of the mental health team. Although clinical observations and theories are encouraging, clinicians face serious challenges in generating evidence to support yoga. This is especially important because in the era of evidence-based medicine, yoga and spiritual methods have to compete with pharmacotherapy. Without the "identical-looking placebo capsule," yoga is handicapped. In yoga research there is no ideal placebo, so double-blind

clinical trials with yoga are nearly impossible.<sup>58</sup> It is not known whether any one of the components of yoga carries most or all of the therapeutic potential. The dose-response effect of yoga, therefore, deserves to be understood.

There are several challenges in the yoga and spiritual therapy research in psychiatry.<sup>59</sup> Severity of illness in mentally ill patients is assessed by interviews and self-reports, and better outcomes are recorded among patients who are inclined to yoga and spirituality. These issues need to be addressed in double-blind, placebo-controlled, and preferably multicenter studies. Objective parameters of the effect of yoga deserve attention to solve these methodological difficulties. Some of the examples are change in grey matter volume in brain and change in telomere length. Yoga practices recommended by influential yoga schools carry with them certain inherent biases or suggestive effects. Another concern that modern physicians may face is faith-based influence. Different yoga schools have different modules of therapy and the frequency of its use, the length of the training session, and the competence of the yoga therapist compound this. Generic yoga modules can partially counteract these factors, and a systematic undergraduate and postgraduate training using these generic modules contributes to a consistent practice all across. Hence, the development of generic and uniform modules of yoga and spirituality for clinical applications is necessary. Clinicians need to recognize this, and an attempt should be made at evolving the yoga and spirituality therapies which should be made easily accessible. Given the increasing evidence of yoga and spirituality as therapy in mental health services, therapists trained in yoga and spirituality are becoming an integral part of the mental health team just like psychologists and psychiatric social workers.

Being Indian neuropsychiatrists, the specialist of mind and brain—which is one and half kilogram of mass of jelly with three billion neurons and vast connectivity, we are able to understand the vastness of universe, mystery of self, self-contemplation, etc. We should work hard to give clarity to the world about the mind and brain, yoga and spirituali-

ty. Practicing and publishing evidence by increasing scientific research and publications and propagation of this knowledge to psychiatrists, in particular, and other medical practitioners, in general, help the human beings to understand what an individual is and what the nature of the universe is. It also helps the human beings to develop from the individual level (selfish—*swakalyana*—level) to the global level (spiritual—*lokakalyana*—level). This is the purpose of the International Yoga Day celebrations that elevate India to the stature of the "World Guru."

As members of this incredible Indian nation, as the finest members of the IPS, as the men of today, you can help to build the world's society. It needs your effort, your will, to regulate stagnation and to shape the humanity. I hope we all come together to bring about social change and build a better society. Our rishi's wish was that India should become the world guru; through research we can make the vision a reality, so that the future citizens of the world would look back to India. You belong to this incredible nation "India" which gave the philosophy of "*Sarvejana Sukinobavanthu*," concept of wellness and human excellence. Let us celebrate the wellness.

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