

**Yogic protocol for dissolving occupational burnout & cognitive  
dysfunction among the office workers.**

*Submitted by*

***Sourav Ghosh***

Under the guidance of

***Dr. Amaravathi Eraballi.Ph.d, MPT, IYT, IAP, ERYT***

Co-Guidance of ***Mr. Rupesh Kumar,***

Towards the partial fulfillment for the degree of

***Master of science in Yoga***

***September 2022***



to

***DEPARTMENT OF YOGIC ART AND SCIENCE***

***VINAYA-BHAVANA, VISVA-BHARATI***

***( A Central University Of National Importance )***

***Santiniketan – 731235, West Bengal, India***

## **ACKNOWLEDGEMENT**

First and foremost, I would like to thank the **Almighty God Anantashri Bhagawan Sitaramdas Omkarnath Dev** for his blessings, helping and guiding me throughout my study.

I would like to thank my father (**Srimanta Ghosh**) and mother (**Chanu Ghosh**), for always supporting me throughout my study and education.

I convey my deep sense of gratitude to **Dr. Amaravathi Eraballi** qualification of **PhD in yoga & life sciences** for the able guidance in completion of the project.

I am greatly indebted to my teacher, instructor and co-guide **Mr. Rupesh Kumar** qualification of M.Sc. in yoga for the help rendered in the completion of the study.

I express my thanks to all the other **Staff Members** of Yogic Art and Science for providing me timely guidance for the project.

I would like to thank all my **Colleagues** at **Yogic Art and Science** for their insightful comments, support and encouragement.

**Mr. Sourav Ghosh**

**STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO  
TRANSLITERATE SAMSKṚTA AND BENGALI WORDS**

অ	আ	ই	ঈ	উ	ঊ	ঋ
a	ā	i	ī	u	ū	r
অ	আ	ই	ঈ	উ	ঊ	ঋ
ঋ	এ	ঐ	ও	ঔ	অ	অ:
ঈ	e	ai	o	au	am	ah
ঋ	এ	ঐ	ও	ঔ	ং	ḥ
	ক	খ	গ	ঘ	ঙ	
	ka	kha	ga	gha	ṅa	
	ক	খ	গ	ঘ	ঙ	
	চ	ছ	জ	ঝ	ঞ	
	ca	cha	ja	jha	ña	
	চ	ছ	জ	ঝ	ঞ	
	ট	ঠ	ড	ঢ	ণ	
	ta	tha	ḍa	ḍha	ṇa	
	ট	ঠ	ড	ঢ	ণ	
	ত	থ	দ	ধ	ন	
	ta	tha	da	dha	na	
	ত	থ	দ	ধ	ন	
	প	ফ	ব	ভ	ম	
	pa	pha	ba	bha	ma	
	প	ফ	ব	ভ	ম	
য	র	ল	শ	ষ	স	হ
ya	ra	la	śa	ṣa	sa	h
য	র	ল	শ	ষ	স	হ
		ক্ষ	ত্র	জ্ঞ		
		kṣa	tra	jña		
		ক্ষ	ন্ত	ন্ত		
		kṣa	nta	nta		

## Content

Sl. No.	Title & Subtitle	Page. No.
1.	Title Page	1
2.	Acknowledgement	2
4.	Transliterate Sanskrit And English words.	3
5	Content	4-7
6	Abstract	8-9
<b>Chapter I</b>		
1.	Introduction	10-22
	1.1 Amplification of Occupational Burnout	10-12
	1.2 Anatomy of cognition	13-14
	1.3 Physiology of cognition	14
	1.4 Tests of cognition	15
	1.5 Deeper aspect of yogic branches	17-22
	1.6 Table of electronic database	22
<b>Chapter II</b>		
2.	Ancient literature	23-28
	2.1 Occupational burnout from Bhagawat Gita	23
	2.2 Burnout Concept in Yoga Vashistha	23-25
	2.3 Burnout in Patanjali Yoga sutra	25-26
	2.4 Evidence of Burnout in Mahabharata	26-27

	<b>2.5</b>	<b>Glimpse of five Preparatory asana</b>		<b>27</b>
	<b>2.6</b>	<b>Yoga Nidra</b>		<b>28</b>
<b>Chapter III</b>				
<b>3.</b>	<b>Scientific Literature</b>			<b>29-30</b>
	<b>3.1</b>	<b>Occupational Burnout And cognitive dysfunction and yoga nidra</b>		<b>29</b>
		<b>3.1.1</b>	<b>Teachers' meditation foe stress, anxiety, occupational burnout (1999) by William B. and more</b>	<b>29</b>
		<b>3.1.2</b>	<b>Nidra on selected psycho motor components after induced fatigue by Chatterjee kollol.</b>	<b>29</b>
		<b>3.1.3</b>	<b>Integrative restoration (I-rest) meditation decrease perceived stress levels and negative moods in school counselors.</b>	<b>29</b>
		<b>3.1.4</b>	<b>transcendental meditation on employee stress, depression, and burnout</b>	<b>29-30</b>
		<b>3.1.5</b>	<b>A regular yoga intervention for staff nurse sleep quality and work stress: a randomized controlled trial</b>	<b>30</b>
		<b>3.1.6</b>	<b>Improving physical and mental health in frontline mental health care providers: Yoga-based stress management versus cognitive behavioral stress management.</b>	<b>30</b>
<b>Chapter IV</b>				
<b>4.</b>	<b>Materials And Methodology</b>			<b>31-36</b>
	<b>4.1</b>	<b>Aim and Objectives</b>		<b>31</b>
	<b>4.2</b>	<b>Hypothesis</b>		<b>31</b>
	<b>4.3</b>	<b>Variables</b>		<b>31-32</b>
	<b>4.4</b>	<b>Study Deign</b>		<b>32</b>
	<b>4.5</b>	<b>Sampling</b>		<b>32</b>

	<b>4.6</b>	<b>Parameters</b>	<b>32-33</b>
	<b>4.7</b>	<b>Time of data Collection</b>	<b>33</b>
	<b>4.8</b>	<b>Instruments</b>	<b>33-34</b>
	<b>4.9</b>	<b>General assessment</b>	<b>34</b>
	<b>4.10</b>	<b>Intervention</b>	<b>35-36</b>
<b>Chapter V</b>			<b>37-49</b>
<b>5.</b>		<b>Discussion</b>	<b>37-38</b>
	<b>5.1</b>	<b>Improvements in occupational burnout with yoga nidra</b>	<b>37</b>
	<b>5.2</b>	<b>Improvements in cortical and sub-cortical interaction with yoga nidra</b>	<b>37</b>
	<b>5.3</b>	<b>Improvements of BMI and vital energy with yoga nidra</b>	<b>37-38</b>
	<b>5.4</b>	<b>Neutral change</b>	<b>38</b>
	<b>5.5</b>	<b>Adverse</b>	<b>38</b>
<b>6.</b>		<b>Conclusion</b>	<b>39</b>
<b>7.</b>		<b>Strength</b>	<b>39</b>
<b>8.</b>		<b>Limitation</b>	<b>40</b>
<b>9.</b>		<b>Future Direction</b>	<b>40</b>
<b>10.</b>		<b>References</b>	<b>41-43</b>

<b>11.</b>	<b>Bibliography</b>	<b>43-44</b>
<b>12.</b>		
	<b>Annexure</b>	<b>45-49</b>
	<b>12.1 Information Of MBI-GS</b>	<b>45</b>
	<b>12.2 Photo-Copy of DSST Questionnaires</b>	<b>46</b>
	<b>12.3 Original Copy of MBI-GS</b>	<b>47</b>
	<b>12.4 Original Copy of DSST</b>	<b>48</b>
	<b>12.5 Sample Data Collection Form (Consent)</b>	<b>49</b>

# **Yogic protocol for dissolving occupational burnout & cognitive dysfunction among the office workers.**

## **Abstract**

**Background:** Occupational burnout is the demand at occupational setup from past decade. Previously it was as hazards that can not be escaped by office workers to earn money for sustaining in this physical world. This demand leads to different diseases and the particular health schemes or health insurance are developing with modern medicine. Yoga as an ancient remedy was not researched yet. Hence the present study focuses on the yoga remedies like yoga nidra.

**Aim:** This study wanted to reveal the yoga-nidra for dissolving occupational burnout/hazards and cognitive dysfunctions.

**Objectives:** The yoga nidra with preparatory *asana* also help to break the chain of disorders like; stress, anxiety, depression, psycho-motor imbalance & endocrine disorders. It also prepares a positive plot for one's social & emotional health.

### **Methodology:**

**Study design:** Pre-post study design.

**Sampling:** Twenty (20) office worker (40-55 yr.) only included for this study. Participants are chosen in stratified method.

**Parameters:** MBI-GS (Maslach Burnout Inventory) and DSST (Digit Symbol Substitution Test) are used as a measuring parameter with general physical assessments.

**Intervention:** Yoga protocol practice time is 60 min (20 min asana +40 min yoga-nidra) for 21 days.

The data will be collected on the 05.10.2021 and 26.10.2021.



**Result:** The data shows there have significant changes in specific data like emotional exhaustion (-23.70%), Professional efficacy (19.88 %), cynicism (-20.02%), DSST ( 9.22 %). There have little bit of change identify in the physical parameters, cardiovascular parameters and respiratory parameters.

**Conclusion:** This study explores the positive relation between *yoga nidra* and preparatory *asanas* with cognitive approach of human brain. This cognitive function or cortical and sub-cortical activity influence for the occupational burnout.

**Keywords:** Occupational burnout, Hazards, Yoga-Nidra, MBI, DSST.

# CHAPTER-I

## 1. Introduction :

### 1.1 Amplification of Occupational Burnout

The human civilization facing a number of health challenges in the garbage of modernity. In this 'work from home' era every type of work like education system (both teacher-student), office worker, health worker, police, emergency service providers etc. mind are surrounding in the barrier of virtual world. In this pandemic situation and modern computerize world gulping the society's natural thinking processes. But to earn money or to be economically stronger the human civilization run incessantly and forget about the other dimension of health. So, the office workers entrap in public interactions, challenges, deadlines, accomplishments and it bring up mental instability. For the past decade this imbalance factor between professional and personal life specially overloaded professional life; recognized as a job hazard, job health hazard or occupational burnout.<sup>[1]</sup>

Occupational burnout or hazard is a very much new phenomena for a reason of many diseases & disorders<sup>[2]</sup> in this modernize system. But the occupational burnout has been studied for last 40 years. Burn-out is included in the latest editions of *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (DSM-5) (2013) and 11<sup>th</sup> revision of the *International Classification of Diseases* (WHO; ICD-11; 2013; 2018) as an occupational phenomenon but it is not mentioned as a medical condition. Occupational burnout describe as 'Factors influencing health status or contact with health services.' "Burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed." It includes three factors; exhaustion, cynicism to one's job or feeling negativism and reduction of personal-professional efficacy about the job. Among the office workers they have many types of cyber-bullying and reinforce job strain<sup>[3]</sup> which are the seeds of burnout, stress, anxiety and many neuropsychological cognitive dysfunctions.<sup>[4]</sup> In the very pioneer finding of burnout, it was conceptualized as a product of social and individual cause. In the middle of

70<sup>th</sup> century, the so-called developed countries like United States, United America etc are facing a new health phenomenon. In beginning stage of research, it has been identified more of a personal than an organizational one.<sup>[3]</sup>

On the research of occupational burnout the MBI described that, the employees develop feelings of indifference and cynicism toward their job and organization. And this is uncovered a defense mechanism in response to hardship, high demands, general overload, unsatisfied work and unable to be skillful in their work environment. Multiple studies shows that employees worn out by their work, exhibited increasing signs of indifference and cynicism regardless of the primary cause of their fatigue. The problem with cynicism is decreasing coping up ability, loss of management strategy, loss of energy during public interaction and a drop in job efficacy & performance. This prevents the individual from feeling invested in their work. And in the end this two leads to feelings of professional incompetence. The individual collapsed in willpower and no longer feels that they are able to do their job probably<sup>[5]</sup>. The first aspect of occupational burnout is emotional exhaustion which is the fruit of scattered mind (*manas*) therefore, charged with feelings of anger, irritation, embarrassment, fear or despair. The dissolving or managing process of this problems are not always obvious and easily obtained, thus adding ambiguity and frustration to the situation. The professional who works continuously with people under such circumstances, the chronic stress, depression and anxiety can be emotionally draining and poses the risk of 'burnout'<sup>[6]</sup>. Occupational burnout is a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind<sup>[7]</sup>. The key aspect of the burnout syndrome is increased feelings of emotional exhaustion. As their emotional resources are depleted, workers feel they are no longer able to give of themselves at a psychological level<sup>[5]</sup>. And the second aspect is to development of negativity, untrusted, cynical attitudes and feelings about one's clients or work. The cynicism is a emotional defensive mechanism which become uncontrolled. The negative reactions triggered when one feel hurt, insecure, and abused about his/her emotion. Then the skeptical and untrustful attitude to clients may be linked to the

experience of emotional exhaustion. Emotional exhaustion and cynicism aspects of burnout appear to be somewhat closely related. This callous or even of cynicism is also known as dehumanized perception of others can lead staff to view their clients as somehow deserving of their troubles<sup>[19]</sup>. The well-documented fact is to prevalence among interactive service professionals of this negative attitude toward clients<sup>[7]</sup>. A third aspect of the occupational burnout syndrome is the tendency to pretending own-self less skillful or evaluate oneself negatively. Nowadays these situations are mostly found particularly with regard to one's work with public interaction or clients. Workers feel backdated, incompetence, misery about themselves and dissatisfied with their accomplishments on the job<sup>[3]</sup>. This aspect shows, one's fulfillment or prosperity in the work life and individual life. The needs of their life style from their job is indicated by this professional efficacy phenomena. Occupational burnout in pioneer study emerged as a social problem, not as a scholarly construct. The second phase of Occupational burnout called "empirical phase". In a long term study of burnout and it's phenomenon in various countries, scholars have developed standardized measures. The most frequently and largely used comprehensive definition is identify and introduced by Maslach in 1981. In basis of various situation Maslach develop the Maslach Burnout Inventory with general survey, Student survey, teachers survey etc. The empirical research on burnout has tended to focus more on job factors than on other types of variables, such as biographical, sociological, or personal components. The root cause, cognitive disbalance and psychomotor hazards are assumed to recognized finally. Scholars have expanded the theoretical burnout framework to include organizational sources of stress, depression and anxiety with strongly connected various physical structural deformities<sup>[3]</sup>. In this study only general phenomena of occupational burnout has been taken. In yogic concept this burnout can defined with Adhi, Vadhi and Adhija-Vaydhi, which talks about the very deep function of thought process, perception, satisfaction or adjustment quality, attitude for world, indivial personality and the problems. The present need is to find a natural solution for such incompetence that can be part of lifestyle. From Ancient texts *Yoga Nidra* is the beneficial technique with few preparatory asanas.

## 1.2 Anatomy of Cognition:

The cognition is a most vital part which give a behavioral part interacts with every tiny aspects of environment. The term cognition means the complex thinking processes of the brain, using both sensory input to the brain plus information already stored in memory. The motor organs and sensory pars are using as a instrument of the process of cognition. Motor actions, afferent and efferent activity also have a complex mechanism in human occur as a consequence of thoughts generated in the mind with previous perception, a process called cognitive control of motor activity. The caudate nucleus plays a major role in this cognitive control of motor activity. The cerebral cortex interpreted the sensory aspect like vision, smell, hearing, test, touch, complex movement, motor organs, visual processing of word, sound / speech recognition, balance, basic perception for relatively recognize the life. The limbic system of sub-cortical brain, demonstrating that they are an interrelated and complementary complex of basal brain elements. The extremely small hypothalamus is placed in the middle of all these. This complex system with hypothalamus from a physiologic point of view is one of the central elements of the limbic system for the cognitive and emotional exhibition. The limbic system controls process such as those involved in anger, fear, joy, sexuality, happiness, hunger, thirst, aggression. This functionality disturbed within workers called emotional exhaustion. This process are closely linked with cognition and short-long term memory. This will interrupt to performed digit symbol substitution. The key position of the hypothalamus in the limbic system and shows surrounding it other subcortical structures of the limbic system, including the hippocampus, anterior nucleus of the thalamus, para olfactory area, portions of the basal ganglia, septum, and amygdala.

The most conspicuous stimulation in raphe nuclei in the lower half of the pons and in the medulla area which causing for almost natural sleep. These nuclei comprise a thin sheet or a circuit like plane of special neurons located in the midline. Nerve fibers from these nuclei spread locally in the brain stem reticular formation and also upward into the thalamus, hypothalamus, most areas of the limbic system, and even the neocortex of the cerebrum as well as a roll of homeostatic.

### 1.3 Physiology of Cognition

Hypothalamus and associated limbic system connections are for fear, punishment reactions, satiety, tranquility and the sexual drive. If these are not controlled in a balance way then it seems to be a tendency of emotional exhaustion and cynicism. It is already clear that several limbic structures complementary with sensory cortex and motor cortex are particularly concerned with the affective nature of sensory sensations—that is, whether the sensations are pleasant or unpleasant. These affective qualities are also called reward or punishment, prosperity or affection and satisfaction or aversion. In the yogic view these sensory perceptions are mentioned as *Raaga* and *Dweshha*. When one lost the durability to manage these, effective cognitions in their work life than they belong to loss the professional efficacy. The electrical stimulations of certain limbic areas please or satisfies. When electrical stimulation of other regions are sustaining for a period of time then causes terror pain, defense, escape reactions and all other elements of punishment. The degrees of stimulation or impression of these two oppositely responding system greatly affect the behavior. Which is looking like the theory of Schrodinger theory. The homunculus of brain cortex, both side of central sulci (voluntary motor cortex, sensory motor cortex) are typically managed by the limbic system, subcortical part of brain.

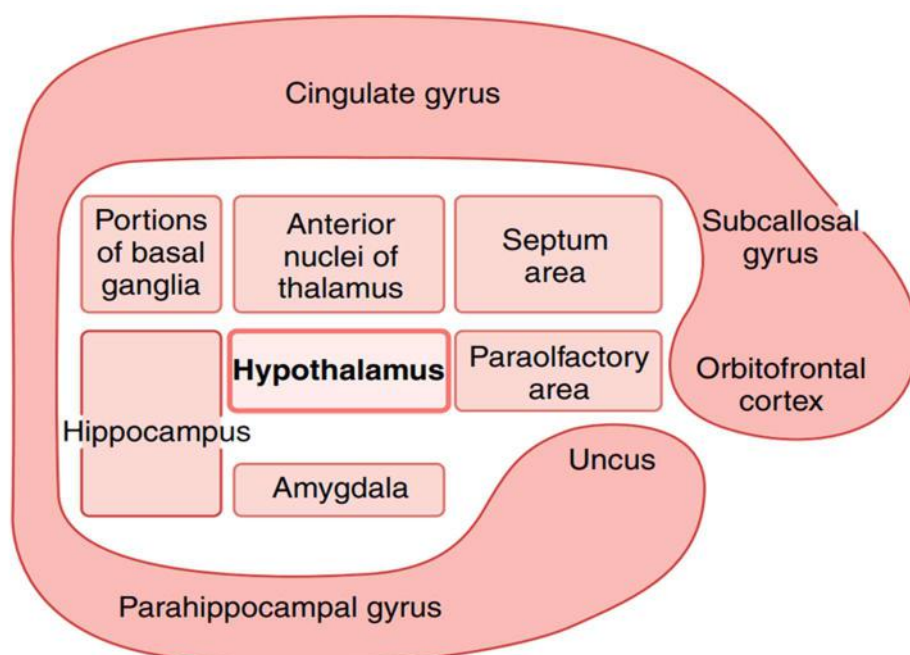
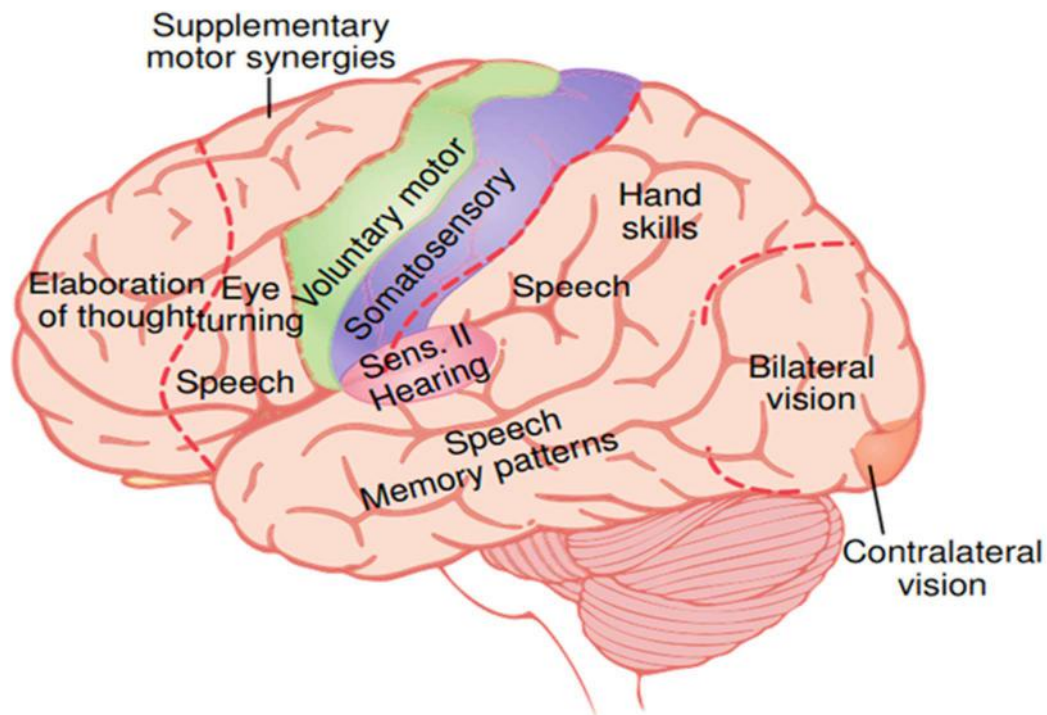


Image-1: Limbic system showing the key position of the hypothalamus.



#### 1.4 Tests of Cognition:

To measuring the cognitive function there have many diagnoses process in the modern medical system.

Theses are;

**Neurological exam:** Reflexes, Eye movement (REM), Walking and balance, Nerve conduction velocity, Electromyography

**Lab test:** Blood tests can helps to rule out physical problems that can affect memory, such as a vitamin B-12 deficiency or an underactive thyroid gland.

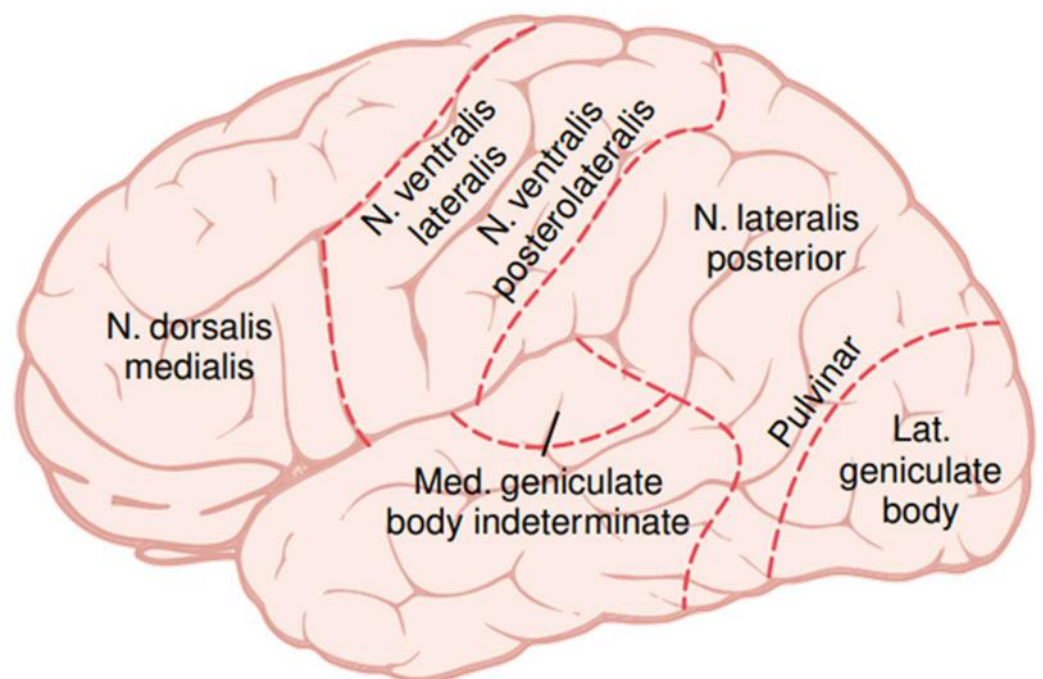
**Brain imaging:** MRI, CT scan to check for evidence of brain tumor, stroke or bleeding which can be a cause of cognitive dysfunctions.

✚ It is clearly observed that; when an individual is having trouble to managing the hazard, stress associated with their work environment then it gives rise to physical exhaustion symptoms. And that situation brings about detachment and cynicism developed to counter this fatigue. The sub-cortical section with homunculus activities are began to react on cognitive behavior; and for prolonged reaction of dysfunctional aspect can generate feelings of professional ineffectiveness. The limbic system,

thalamus and hypothalamus drive the emotional and psychological behavior in an unmanaged way. From a psychometric perspective, this model assumes, therefore, that higher levels of depersonalization and cynicism are associated with increasing exhaustion (positive correlation between the dimensions of exhaustion and cynicism), and that a gradual decrease in professional efficacy are accompanied by growing feelings of cynicism, there have a negative correlation between the dimensions of cynicism and professional efficacy. So, in some event a protective mechanism against stressful situation in work environment influence to appear cynicism and as an inappropriate coping up strategy. In this situation professional detachment is required, but slowly this attitude towards the job brings more difficulties. <sup>[19]</sup>

Intra personal factors, emphasizing mostly the psychology of the individual, where the focus is on the lack of balance between the caregiver's expectations and the actual reality. In every interpersonal perspective the focal point is the interactive relationship between caregivers and the client. Meanwhile it found that the factors triggering for occupational burnout as one might expect huge and multivarious. But as the view of organizational factors; it based on the mismatch between worker and job organization. <sup>[2]</sup> Previously Maslach explored the burnout syndrome can lead to a deterioration in the quality of care or

service that is provided by the staff<sup>[3]</sup>. This burnout syndrome appears to be a factor in job turnover, untruthful, absenteeism, and



➤ Areas of the cerebral cortex that connect with specific position/section of the thalamus



low morale. Furthermore, burnout seems to be correlated with various self-reported indices of personal distress, insomnia, including physical exhaustion and structural deformities, increased use of alcohol and drugs, and aloofness in marital and family life<sup>[6]</sup>. Till now research in this area was very exploratory, relying heavily on interviews, questionnaire surveys, and observations<sup>3</sup> and also go for FMRI or brain wave measurements. Its shows that the burnout have a huge effect on one's behavior, personal relations, public interactions, emotion controlling (anger, fear, dependency, lack of sensitivity)<sup>[7]</sup> as well as endocrinal imbalances, heart diseases, back pain, many types of spine disbalance and cognitive dysfunctions<sup>[4]</sup>. In the present study, the personality will be pulled from external world targets towards internal perceptions and reduce the burnout for few minutes to hours. It is expected to be extend to days and months.

### **1.5 Deeper aspect of yogic branches:**

*Yoga* is one of India's oldest and most extensive psycho-spiritual traditions. It has evolved over 5,000 years to encompass a vast body of moral and ethical precepts, mental attitudes, and physical practices. The word "*yoga*" is derived from the Sanskrit Verb "*yu*" meaning to yoke or unite. Generally WHO and western modernity translate *yoga* to imply the union of body, mind, and spirit. But in the ancient time *yoga* is stands for a whole-some development in education, working life, science of existence and liberation. Mostly this technique has 'eight-fold path' which includes *yamas* (moral discipline) *niyamas* (self-restraint), *asanas* (physical poses), *pranayama* (breath control), *pratyahara* (sensory inhibition), *dharana* (concentration), *dhyana* (meditation), and *samadhi* (blissful state). This all form are seek to evolute the one's consciousness, realization, incitement of true self. In-spite of these there have also *Hatha Yogic* texts, *Raja yoga*, *Karma yoga*, *Bhakti yoga* etc. But the most relevance one this modern era is *Patanjali yoga sutra* and *Hatha yoga*. Independently and comprehensively these 'eight-fold path' practices have been shown to improve discipline, morality, human ethics, empathy, compassion, attention, controlling over scenes, body-mind-spirit cooperation, intelligence, visual concentration and cognitive function or *Jnanaindrya* and *Karmendriya*.

### 1.5.1 *Yoga Nidra* and Five preparatory asana:

This *yoga-nidra* word first derive in *Vishnu-purana*, there mention as the *Lord Vishnu* sleep in an infinity context but he is totally aware on about the creation which was created by him. There have very few information about *yoga nidra* and its technique in ancient Indian methods of knowledge<sup>[8]</sup>. But in the very much early scriptures the techniques of *yoga nidra* was scripted in *tantric* philosophy. In *yoga nidra*, the consciousness is in a state between waking and sleep, but it is subject to neither. In modern psychology this has been termed ‘the hypnagogic state’.<sup>[20]</sup> The *Yoga nidra* is an ancient technique of meditation or to aware on about self by withdrawing the five scenes.<sup>[20]</sup> It is among the deepest possible states of relaxation while still maintaining full consciousness which is called *pranjana* in the *Mandukya Upanishad* <sup>[26]</sup>. The *Yoga Nidra* is a state of consciousness between awaking & sleeping, also a process of sleeping with a full state of awareness.<sup>[20]</sup> *Yoga nidra* is a systematic method of inducing complete cognitive, physical, mental, and emotional relaxation. Nowadays the scholars got lots of evidence that the brain waves are attractive to a deep state of resolving or deep sleep during *yoga nidra*. The most part of the brain specially homunculus, cortical and sub-cortical part, limbic system, voluntary and somatosensory part of central sulci are quite rejuvenated to neuro-psychological functioning.

There have a number of evidence that *yoga nidra* helps to control over mind and through the mind one can tune his/her emotions, self-esteem, and scenes<sup>[12]</sup>. There has enough evidence which shows mindfulness-based approaches like meditation some asanas have two central components: development of an observing attitude toward one’s experience and cultivation of a nonjudgmental acceptance of what is being experienced without the need to change or act on it. There is also a welcoming attitude in initial deep relaxation component that facilitates the opportunity to mindfully and intentionally work with specific emotions, thoughts, images, memories cognitive functions that manifest as physical sensations<sup>[9]</sup>. In the earlier state the *yoga Upanishads* clearly mentioned about the *yoga nidra*. The *pratyahara* or the withdrawing of senses from outer to inward and concentrate or to

visualize the various part of body is on of the process of body. This method of *yoga nidra* can give you to a huge amount controlling over the sleep, consciousness, body, five senses and the *viveka/manas/mind*.<sup>[22]</sup> We already know that *yoga nidra* have a positive impact of physical body to recovery and rejuvenate as well as various involuntary systems of our body which are control by the brain, endocrine system and nerves system. Essentially the impacts are clearly shown in various modern mechanism of machine.<sup>[10]</sup>

In yogic concept asana is one of the steps for self-realization. Literally asana means a place to seat as irrevocable way. So, its refer to adopt a position in a blissful way with full steadiness. In this protocol the five asanas are included as a catalyzer for dissolving the burnout syndrome. We included *Tadasana*, *Ardha kati chakrasana*, *Gomukhasana*, *Shashankasana* and *Bhujangasan* for our preparatory asana protocol.

The *tadasana* or palm tree pose is the very first asana in this session for gathering attention, creating little heat or energy for the session. In many yogic literatures mentioning about the concept of *tadasana*. There have many variations of *tadasana* but the balancing on the toe with hands over the head this method was followed in this protocol.<sup>[23]</sup> It's encouraged the psychomotor functions by improving the balancing ability of body. In this asana the Base of Support of body is reduce so the Center of Gravity also rise up through the Line of Gravity. In this regard the body have to learn to give more effort for keeping the balance with psychomotor regulation.

The next asana is *ardha-chakrasana* or half wheel pose belongs to a standing asana with a subgroup of back bending asana. This asana is a variation of *chakrasana* or an easy part of *chakrasana* which is mentioned in *Hataratnavalli*. In this asana; tilt the head back or bend the thoracic and clavicle section in backward with placing the hands palms on the lower back side. This asana makes the spine flexible so that spine stays in its original shape with the intervertebral disk. So, the cerebrospinal fluid and

nerves curriculum work fluently. Rejuvenate the brain nerve by sufficient flow of blood which also dissolve the stress, anxiety<sup>[24]</sup>.

*Gomukhasana* or 'cow's face pose' is the most mentioned *asana* in yogic literature like *Hatha-yoga-pradipita*, *Gheranda Samhita* etc. This asana flows the *pranic* energy in a complete circuit through the spine. This asana is very much vibrant for our energy body which directly controlling our mind<sup>24</sup>.

*Shashankasana* or hare pose is a meditative, static and relaxation *asana*. This asana give the spine a gentle flexibility with cooling down the fluctuation of energy. In *vajarasana* with total forward directed surrendering is also grow the ability to observe oneself as an observer. This asana is effective in various aspect.

*Bhujangasana* or cobra pose is recommended as a highly destroyer of negativism.

In-spite of these the *bhujangasana* can be beneficial for lower back, spinal cord, cerebrospinal fluid, brain cells.<sup>[23]</sup>

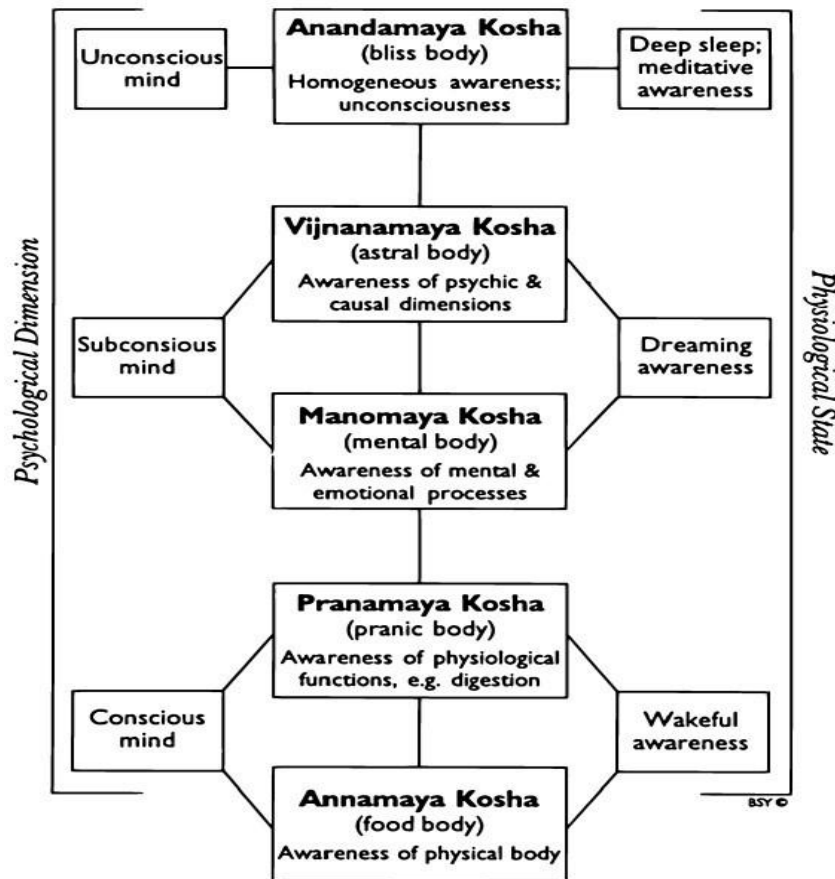
Indian ancient techniques always find the root of every problem & *yoga* become a habit of life to naturally tuning the health. The *Asana* and Meditation have a direct positive impact on physical-mental dimension<sup>[23]</sup>.

**1.5.2 Annamaya Kosha:** The five preparatory *asanas* try to resolve the physical uneasiness along with the nervous stability. This asana brings the Psychophysiological co-ordination. And the asanas bring the stability in physiological and brain activity.<sup>[9]</sup>

**1.5.3 Pranamaya Kosha:** Breath Awareness in *asanas* and *yoga nidra*, and the observing the *Pranic* flow throughout the body. Regulate the Respiratory mechanism in quite voluntary way.

**1.5.4 Manomaya Kosha:** Visualization of the body parts by *yoga nidra*, sensation all over the body. And try to gaining the capacity of dissolving the sensation in the particular parts of the body with the cognitive approach of brain.

**1.5.5 Vijnanamaya Kosha:** Feedback and discussion through questionnaire and interview and yoga nidra purify the consciousness of one's. Jnanendriya and Karmendriya make a scope to take a balanced responsibility of body-mind, physical-psychological aspect and brain activity.



**Image: 2.** States of consciousness in respect of five sheath of existence

*Yoga nidra* can explore the three states of consciousness in respect of five sheath of existence. Body-mind can make a scope to reconnect within itself. In the mind can achieve the three state of consciousness with much awareness. The Psychological dimension and state both are relatively interconnected with five layer of existence or *Panchakosha*. The States of sleep or consciousness activating the physical body, energy or electro-magnetic dimension of body, mental and emotional process, psychic and homogeneous stability or tuning or rejuvenation<sup>[26]</sup>. *Yoga-nidra* with the five

preparatory *asana* is a practice have a positive impact on occupational burnout and it's other effects. There is very often research on this topic. And this topic has much more to explore. The *yoga nidra* with preparatory *asana* also helps to break the chain of disorders like; stress, anxiety, depression, psycho-motor imbalance & endocrine disorders. A large body of research provides evidence of the effectiveness of meditation and mindfulness practices for reducing negative mental health symptoms, including stress and anxiety, as well as enhancing psychological well-being in general and in clinical populations.<sup>[11]</sup>

### 1.6. Table of Electronic Database

#### CHAPTER - II

Keywords	Journals		
	Pub-med	Science-direct	Sodhganga
Occupational burnout	351	6494	24085
Hazards	23640	699668	11469
Cogitation	45013	307712	10285
Yoga-Nidra	48	120	4395
Maslach Burnout Inventory Genarel servey (MBI-gs)	17	874	890
Digit Symbol Substitution Test	672	20151	82070
Yogic Protocol For Dissolving Occupational Burnout & Cognitive Dysfunction Among The Office Workers.	0	0	0

## 2. ANCIENT LITERATURE

### 2.1 Occupational burnout from Bhagawad Gita

- ध्यायतो विषयान्पुंसः सङ्गस्तेषूपजायते ।

सङ्गात्सञ्जायते कामः कामात्क्रोधोऽभिजायते ॥ 2-62 ॥ B.G <sup>[28]</sup>

*dhyāyato viṣhayān puṁsaḥ saṅgas teṣhūpajāyate*

*saṅgāt sañjāyate kāmaḥ kāmāt krodho 'bhijāyate*

**Meaning:** When a person thinks of an objects, attachment for them ascends; from attachment desire is born; from desire arises anger.

- क्रोधाद्भवति सम्मोहः सम्मोहात्स्मृतिविभ्रमः ।

स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति ॥ 2-63 ॥ <sup>[28]</sup>

*krodhādbhavati sammohaḥ sammohātsmṛtivyibhramah*

*smṛtibhramśād buddhināśo buddhināśātpṛaṇāsyati*

**Meaning:** From anger comes delusion; from delusion loss of memory ; from loss of memory the destruction of discriminating factor(vevaka)/intellect; from destruction of discriminating factor/intellect, are successively arise, then he perishes.

### 2.2 Burnout concept in Yoga-Vashistha

#### 2.2.1 Concept of adhi-vayadhi

- आधयो व्याधयश्चैव द्वयं दुःखस्य कारणम् । तन्निवृत्तिः सुखं विद्यात्क्षयो मोक्ष उच्यते ॥ ( Y.V. 6/81/12) <sup>[21]</sup>

*Ādhayō vyādhayaścaiva dvayaṁ duḥkhasya kāraṇam. Tannivṛttiḥ sukhaṁ vidyātkṣayō mōkṣa ucyatē.*

**Meaning:** Vasishtha replied:—Know Rama, that uneasiness and sickness, are both of them

the causes of pain to the body; their healing by medicine is their remedy, which is attended with our pleasure; but the killing of them at once by our liberation (from the sensations of pain and pleasure), is what conduces to our true felicity

- आधेः कथं भवेद्याधिज्ञ कथं च स विनश्यति। (Y.V. 6 / 81/29) <sup>[21]</sup>

*aadheh kathan bhavedvyadhijh kathan ch sa vinashyati.*

**Meaning:** Rama rejoined:—But tell me sir, how the intrinsic causes produce the external diseases; and how are they removed by other remedies than those of medicinal drugs, as the muttering of mantra incantations and observance of pious acts and ceremonies.

संक्षोभात्साम्यमुत्सृज्य वहन्ति प्राणवायवः ।

देहे गजप्रविष्टेन पयांसीव सरित्तटे ॥ ३२ ॥ <sup>[21]</sup>

*saṁkṣobhātsāmyamutsṛjya vahanti prāṇavāyavaḥ |*

*dehe gajapraviṣṭena payāṁsīva sarittate || 32 ||*

**Meaning:** The spirit being troubled, the vital spirits are disturbed and breathe out by fits and snatches; as the waters of a river being disturbed by a body of elephants, rise above its channel and over flow the banks.

- असमं वहति प्राणे नाड्यो यान्ति विसंस्थितिम् ।

असम्यक्संस्थिते भूपे यथा वर्णाश्रमक्रमाः ॥ ३३ ॥ <sup>[21]</sup>

*asamaṁ vahati prāṇe nāḍyo yānti viśamsthitim |*

*asamyaksaṁsthitite bhūpe yathā varṇāśramakramāḥ || 33 ||*

**Meaning:** The vital airs breathing irregularly, derange the lungs and nerves and all the veins and arteries of the body; as the misrule in the government, puts the laws of the realm into disorder.



कुजीर्णत्वमजीर्णत्वमति जीर्णत्वमेव वा । दोषायैव प्रयात्यन्नं प्राणसंचारदुष्क्रमात् ॥ (Y.V 6/81/34) [21]

*Kujīrṇatvamajīrṇatvamati jīrṇatvamēva vā Dōṣāyaiva prayātyannaṁ prāṇasañcāraduṣkramāt*

**Meaning:** The breathings being irregular, unsettles the whole body; by making the blood vessels quite empty and dry in some parts, and full and stout in others, resembling the empty and full flowing channels of rivers.

## 2.3 Burnout in PYS:

### 2.3.1 Chitta or mind

वृत्तयः पञ्चतय्यः क्लिष्टाक्लिष्टाः ॥ ५ ॥ [29]

*Vṛttayah pañchatayyah kliṣṭākliṣṭāḥ*

Vṛttayah; Activities / modifications of mind; pañchatayyah: fivefold\ five types; klista painful\misery, lit. hard, difficult; akliṣṭāḥ: not painful.

**Meaning:** Activity / Modifications of mind are fivefold; they are farther two; painful and not painful.

### 2.3.2 Nidra

अभावप्रत्ययालम्बना वृत्तिर्निद्रा ॥ १० ॥ (P.Y.S 1/10) [29]

*Abhāva-pratyayāḥ alambanā vṛttirnidrā*

Abhāva: absence; pratyaya: content of mind; alambana: support; vṛttih: modification; nidrā: sleep

**Meaning:** the absence of mental consciousness on any content recognize as sleep vritti/ action.

### 2.3.3 Smriti

अनुभूतविषयासम्प्रमोषः स्मृतिः ॥ ११ ॥ [29]

*Anubhūtavīṣayāsampraṁoṣaḥ smṛtiḥ*

Anubhūta: experienced; viṣaya: objects of sense perceptio asampramoṣah: not letting escape; smrtih: memory

**Meaning:** Not letting the experienced objects escape from the mind is memory.

### 2.3.4 Chittavikshepa (obstacles)

व्याधिस्त्यानसंशयप्रमादालस्याविरतिभ्रान्तिदर्शनालब्धभूमिकत्वानवस्थितत्वानि

चित्तविक्षेपास्तेऽन्तरायाः ॥ ३० ॥ (P.Y.S 1/30) <sup>[29]</sup>

*Vyādhistyānasamśayapramādālasyaṅviratibhrānti darśanālabdhabhūmikātvānavasthitātvāni  
chittavikṣepāste'ntarāyāḥ*

**Meaning:** Disease, dullness, doubt, procrastination, laziness, craving, erroneous perception, inability to achieve finer stages and instability are the obstacles.

### 2.3.5 Chittva Vikshep shahabhuva (other obstacles)

*Dukhadurmanasyangamejayatvasvasaprasvasa viksepasahabhubha* (P.Y.S 1/31) <sup>[29]</sup>

**Meaning:** The another obstacles or Vikshep shahabhuva or mental distractions are like; pain, depression, shaking of body and the unrhythmic/ uncontrolled breathing.

### 2.3.6 Pancha Klesha

*Avidyasmitaragadvesabhinivesah klesah*

**Meaning:** The five types of afflictions are ignorance, i-feeling, liking, disliking and the fear of death.

## 2.4 Evidence of Burnout in Mahabharata:

There have number of characters in Mahabharata those who clearly indicating that they were suffering from occupational-burnout. The star character Devabrata or Bhishma knew that the honesty or truth always keep the side of Pandavas, but Bhishma have to keep fighting against Pandavas.

The Surya putra Karna also knows that he doing wrong with Pandavas and the Kuravas is doing wrong with pandavas. But he have to take the side of Kuravas. And that's why every character was suffering from many types of conflicts within own-self but they have to maintain the oath or rules or relationships. But they became more frustrated or depressed by maintain those. This may cause for occupational-burnout.

## **2.5 Glimpse of five Preparatory *asana* :**

### **2.5.1 *Gomukhasana* in *Hatha Yoga Pradipika*:**

Hatha yoga pradipika says on about this *Gomukhasana* :

“*savye dakshinagulkan tu prshthapaarshve niyojayet*

*Dakshinepi tatha savyan gomukhan gomukhaakrtih*” (H.Y.P 1\20) [25]

### **2.5.2 In *Gheranda Samhita* clearly describe about *Bhujangasana* :**

“*Angusthanaabhiparyantamadhobhumanu ca vinyaset*

*Dharaam karatalaabhyaam dhritvordhvasah phanuva hi*

*Dehaagnirvardhate nityam sarvatogavinaashanam*

*Jaagarti bhujagi devi bhujangasanaadhaat* (L.02, V.43,44)

**2.5.1** There have lot of elaboration about the *Tadasana*, *Ardha Katichakarasana*, *Sashankasana* in the B.K.S. Iyengar. Light on Yoga, The Classic Guide to Yoga and Asana pranayama mudra bandha.

## 2.6 Yoga nidra

- Swami Satyanand Saraswati explain the five different steps or deeper format on about the *Yoga-nidra* in his book. The systematic evolution of consciousness are explore in this book with modern mechanical evidences.<sup>[20]</sup>
- The *Sandilya Upanishad* also mentioned the steps of *yoga nidra*, which is very essential for *Pratyahra* or withdrawing the scenes to bring the more relaxation, and this conscious sleeping or meditation brings to the higher state of consciousness. Also the attentivity of body bring the psychomotor relation.<sup>[22]</sup>
- There have also many dialogs in the *Mandukya upanishada*. And the buddhist meditation system, tantric meditation system. They mentioned that in this process the involuntary activates are become voluntary by gaining the consciousness on the physical and psychic dimension.<sup>[26]</sup>

## CHAPTER - III

### 3. Scientific literature

#### 3.1 Occupational Burnout and cognitive dysfunctions and yoga nidra:

- 3.1.1 According William Barker; Kathleen R Kiewra School Psychology Quarterly; Spring 1999 there is highly significant reduction of anxiety, emotional exhaustion as part of occupational burn out (MBI) in teachers with meditation. But this study was done 2 decades back. Since then, there are no relevant information about such ancient techniques. Present study may help because of focusing on mental relaxation technique called Yoga Nidra.<sup>[13]</sup>
- 3.1.2 In a study of Kollal C. the yoga nidra has a significant effect on recovery from induced fatigue which effects psychomotor performance namely head steadiness, reaction time, balancing ability and orientation ability. And the duration of the Yoga Nidra clearly enhancing the specific perception, recovery pattern, mind to muscles relaxation. So in the present study also on the cognitive factors and the psychophysiological relation with the Yoga Nidra, using the DSST and MBI psychological questionnaires.<sup>[9]</sup>
- 3.1.3 According to Birdsall, Pritchard, Elison-Bowers, & Spann, 2011; Engel et al., 2007; Pritchard, Elison-Bowers, & Birdsall, 2010; S tankovic, 2011 proved yoga Nidra as the best tool for relaxation beyond words. But physiological correlation with yoga Nidra was not explained from 2007 to 2011 in their follow-up studies. Present study focused on specifically on physiological changes and the cognition with digit symbol substitution test (DSST) immediately after yoga nidra.<sup>[14]</sup>
- 3.1.4 According to Charles Elder, Nidich S, Moriarty F, Nidich R, (winter 2014) the Transcendental Meditation (TM) reduce psychological and physiological responses to stress pathways, including distressed sympathetic nervous system activity with hypothalamic-pituitary-adrenal axis through control over the secretion of elevated cortisol levels. So it also reduce the risk factor of allostatic load linked with hypertension, obesity and negative health behavior, burnout

among the school employees. By taking this physiological base, present study focus on burnout of employees specifically and assessing with related mental health questionnaires. This may help to get subjective feedback because burnout is subjective expression. So DSST and questionnaires after yoga nidra (awared sleep) is best way of syn-opsis than expensive mechanical assessments.<sup>[15]</sup>

3.1.5 Fang, R.; Li, X (J. Clin. Nurs. 2015, 24, 3374–3379)) presenting enough evidence that yoga can improve the sleep quality and quality of life by reducing the work stress, lower back pain during the work pressure. In the present study, few preparatory asanas planed prior to yoga nidra session to remove such muscular pains from daily work load of the occupation.<sup>[16]</sup>

3.1.6 Riley K.E. in 2017 worked on yoga-based stress management compared with cognitive behavioral stress management (CBSM) and yoga-based stress management (YBSM). This two interventions combinedly develops the life style of health professionals than yoga alone. Coping confidence improve with cognitive management and physical activities improves with yoga management. Yoga itself works for perception that can not be divided at physical level as cogitation. In this study of yoga nidra connecting the perception and cogitation with DSST.<sup>[17]</sup>

**Summary:** The output of every scenery aspect collected by the five organs then this are decoded and control by the different part of the cerebral cortex. Cognition is the most vital part to adjust or create a perspective approach for human psychology. This is mainly arranged by the Limbic function and farther regulated through hypothalamo-pituitary-adrenocortical axis. Yoga nidra, various yogic meditative practices and also chanting have a significant observation on brain waves, neuro-psychological function of brain.

## CHAPTER -IV

### 4. MATERIALS AND METHODOLOGY

#### 4.1. Aims and objectives:

##### 4.1.1 Aims:

To reduce the occupational burnout and cognitive dys-function through yoga nidra with preparatory asanas.

##### 4.1.2 Objective:

Comparison of the pre-post scores of MBI-GS for occupational burnout

Comparison of pre-post scores of DSST for Cognitive dysfunction

#### 4.2 HYPOTHESIS:

**4.2.1 Hypothesis-0 (H<sub>0</sub>):** Yoga nidra with preparatory asana may not change the occupational burnout and cognitive dys-function.

**4.2.2 Alternative Hypothesis-1 (H<sub>1</sub>):** Yoga nidra with preparatory asana may change the occupational burnout.

**4.2.3 Alternative Hypothesis-1 (H<sub>1</sub>):** Yoga nidra with preparatory asana may change the cognitive dys-function.

#### 4.3 Variables

**4.3.1 Independent:** The independent variables are five preparatory asanas (*Tadasana, Ardha kati-chakrasana, Gomukhasana, Shashankasana, Bhujangasana*) and *Yoga Nidra*.

##### 4.3.2 Dependent:

- Maschla's burnout inventory- General survey (MBI-GS) for Occupational burnout

- Digit symbol substitution test. (DSST) for Cognitive dysfunctions.

**4.4 Study Design :** Pre- Post experimental study .

**4.5 Sampling:** Stratified sampling, total number of subjects 20.

**4.5.1 Inclusion criteria :** The sample are chosen stratified method those who are office worker or any types of every day job. The age group of the subject range between 40-55 years.

**4.5.2 Exclusion criteria :** The grater than 40 years and less than 55 years subjects are taking away from this study. Those who are already practicing yoga, that subjects are excluded. People with suffering from chronic heart disease, chronic psychological disbalances. Irregular subjects are the big barrier.

**4.6 Parameters:**

**4.6.1 General Parameters:**

1. Body weight
2. Body height
3. Pulse rate
4. Blood pressure
5. PEFr
6. SpO<sub>2</sub>
7. Inhale breathing holding time (IBHT)
8. Exhale breathing holding time (EBHT)

**4.6.2. Specific Parameters:**

1. Maslach Burnout Inventory (MBI-GS) with three sub scale (Emotional Exhaustion, Professional efficacy, Cynicism).
2. Digit Symbol Substitution Test (DSST)



#### 4.7. Time of collection :

Pre and post data will take after leaving the participant for 10 min in resting position.

#### 4.8. Instrument :

**4.8.1 Maslach Burnout Inventory–General Survey (MBI-GS)<sup>[18]</sup>:** The gold standard inventory is Maslach Burnout Inventory, and in this study the Maslach Burnout Inventory- General survey (MBI-GS) was used which have 16-item, 7-point Likert-type scale (6 = *every day*; 0 = *never*) self-report instrument that assesses attitudes, behavior, perception towards one's work. In this inventory, '0' refers to 'no occasion over the course of the year'; '1' denotes to 'very rarely over the course of the year'; '2' 'on some occasions over the course of the year'; '3' indicates to 'on many occasions over the course of the year' ; '4' marked as 'frequently over the course of the year' ; '5' refers to 'almost every day'; and, '6' denotes 'every day'. One can tick the liker scale as a response of given questions. Maslach and Leiter describe the three dimension in the inventory: Exhaustion (EE) is the base quality of burnout and the most obvious central manifestation of this complex syndrome and refers to feelings of being overextended and depleted of one's emotional and physical resources. As an example, be exemplified by the questionnaire question "I feel exhausted by the end of my working day".

Cynicism (Cyn) is grown up just after the emotional exhaustion as a defensive mechanism. But the cynical attitude an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people. It refers to a negative, callous, or excessively detached response to various aspects of the job and could be exemplified by the sentence "I only want to do my job and not be bothered".

The last phenomena is reduced of professional efficacy (Pro. Ef) or accomplishment represents the self-evaluation dimension of burnout. It refers to feelings of incompetence and a lack of achievement and productivity at work. Could be represented by the question "In my opinion, I am very good at my job". The 16 items are mixed with these three types of burnout components. The ten (10) questions

were characterized negatively and rest six (6) were positively considered. Maslach Burnout Inventory-General survey contains three subscales: emotional exhaustion, cynicism, and professional efficacy. High scores on emotional exhaustion and cynicism and low scores on professional efficacy are indicators of burnout<sup>12</sup>. But in this research the six positive items of professional efficacy are scored as reversely. So that the high score of professional efficacy indicates more burnout and the low score of professional efficacy indicates low burnout tendency. So, that the graphical presentation should be in a same hierachy as the other component presented. And some time people get confused to look the lower value of professional efficacy and think about that they have no any burnout. So, the scoring was done reversely.

**4.8.2 The Digit symbol substitution test (DSST):** Measures a range of cognitive operations. In various method the DSST can be scored. In this study, it looking for; how many digit-symbols are correctly recognize and write down into the box in respect of at an unit time or at a single minute. The incorreced attempted are excluded. Good performance on the DSST requires intact motor speed, attention, and visuo-perceptual functions, including scanning and the ability to write or draw (ie, basic manual dexterity). Performance might also be affected by associative learning. The decision to consciously engage in this learning strategy to improve performance speed calls for the executive functions of planning and strategizing. Working memory, another executive function, is likely required to hold in mind the task rules and for the continual updating of required symbol-digit pairs.

#### **4.9. For the general assessment:**

Sphygmomanometer use for measuring the systolic & diastolic blood pressure. An atrial blood pressure reading consist of two numbers, which recorded as  $x/y$ . The  $x$  is the systolic blood pressure, and the  $y$  is the diastolic pressure. Systole refers to the contraction of the ventricles of the heart into the pulmonary and systematic arterial circulation, and diastole refers to the resting period, when the ventricles expand and receive another supply of blood from the atria. At each heartbeat, blood pressure

is raised to the systolic level, and between beats it drops to the diastolic level. This machine compares the pressure of the blood with the pressure of the number of millimeters of mercury column height.

#### **4.10. Intervention:**

Yoga protocol practice time is 60 min (20 min asana +40 min yoga-nidra) for 21 days.

Five preparatory asanas and *Yoga Nidra*.

For the first twenty minute the *Tadasana*, *Ardha kati-chakrasana*, *Gomukhasana*, *Shashankasana*, *Bhujangasana* are practicing in a systemetic method according to APMB.

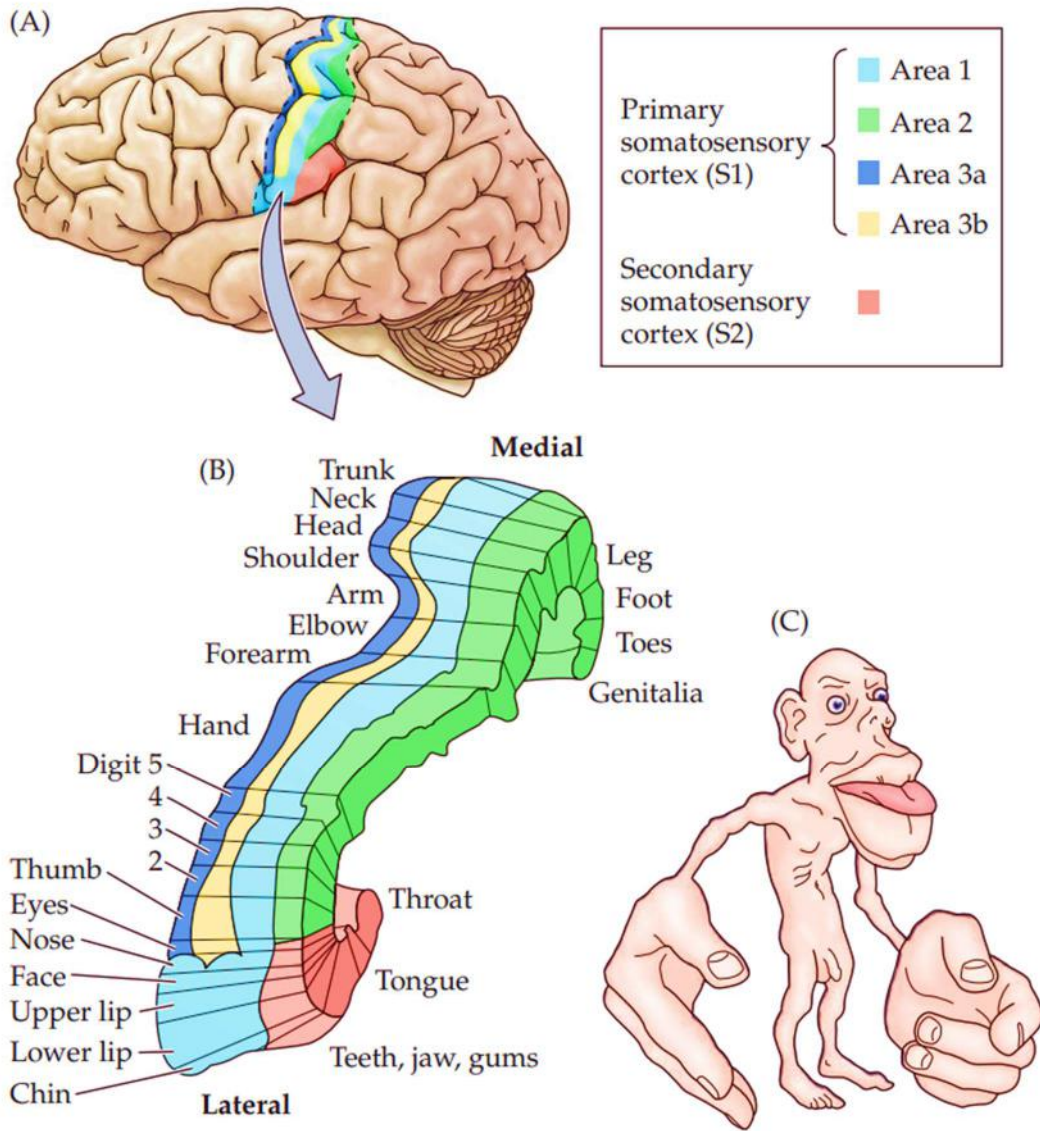
After the Asanas the yoga nidra giving a trance for next forty minute. Only Yoga nidra step 1, Yoga nidra 2, Yoga nida 3, Yoga nida 4 are given according to Yoga-Nidra by Swami Satyananda Saraswati.

Yoga nidra 1: Relaxation → Resolve → Rotation of consciousness in right, left, back, front, major part of body, navel chest, throat and nostril → prelude to sleep.

Yoga nidra 2: Antarmouna → Resolve → Rotation of consciousness in right, left, back, front, major part of body, navel chest, throat and nostril → Awareness of sensation heaviness/lightness, cold/heat, pain/pleasure. → *Cidakasha* / Heart region → Floating body.

Yoga nidra 3 : Antarmouna → Resolve → Rotation of consciousness in right, left, back, front, major part of body, navel chest, throat and nostril → Awareness of sensation heaviness/lightness, cold/heat, pain/pleasure. → *Cidakasha* / Heart region → eyebrow center → golden egg/ explosive light on eyebrow center.

Yoga nidra 4 : Om chanting → Resolve → Rotation of consciousness in right, left, back, front, major part of body, navel chest, throat and nostril → Awareness of sensation heaviness/lightness, cold/heat, pain/pleasure. → *Cidakasha* / Heart region → eyebrow center → golden egg/ explosive light on eyebrow center.



A. Homunculus of brain.

B. Homunculus point uses for *Yoga Nidra*.

## Chapter V

### 5. DISCUSSION

High scores on emotional exhaustion and cynicism and low scores on professional efficacy are indicators of burnout<sup>12</sup>. But in this research the six positive items of professional efficacy are scored as reversely. So that the high score of professional efficacy indicates more burnout and the low score of professional efficacy indicates low burnout tendency.

#### 5.1 Improvements in occupational burn out with *yoga nidra*

Emotional Exhaustion(EE) improved from  $18.7 \pm 3.54$  to  $14.25 \pm 3.05$  with -23.70% of changes. And the standard deviation of the post data was closer to the mean than the post data of Emotional Exhaustion.

Professional Efficacy (Pro.E) improved from  $13.95 \pm 5.21$  to  $10.65 \pm 3.42$  with 19.88 % of change. The post standard deviation very much near to the mean than the pre-data of Professional Efficacy.

Cynicism (Cyn) improved from  $18.6 \pm 4.55$  to  $14.75 \pm 3.35$  with -20.02 of % change. The low standard deviation in post data shows that the improvements were towards in a point.

#### 5.2 Improvements in cortical and sub-cortical interaction with *yoga nidra*

Digit Symbol Substitution Test (DSST) improved from  $26.85 \pm 5.46$  to  $29 \pm 4.67$  with 9.22 % of change.

The standard deviation reduced in respect of pre-data of Digit Symbol Substitution Test which shows that the scatter-ness reduced.

#### 5.3 Improvements of BMI and vital energy with *yoga nidra*

BMI improved from  $24.53 \pm 3.53$  to  $24.45 \pm 3.40$  with -0.270% of change. But the improvement is acting as a normal BMI requirement.

The Peak Flow rate became  $426.5 \pm 126.62$  to  $437 \pm 125.07$  with 2.87%of change which shown that a positive approach of Peak Flow rate. The improvement stays under the normal rate of Peak flow rate.

Internal Breath Retention time improved from  $32.34 \pm 9.75$  to  $33.83 \pm 8.61$  with 6.73% percent of changes.

External Breath Retention time improves from  $23.07 \pm 5.72$  to  $24.01 \pm 5.59$  with 6.43% of change detected.

SBP shown 3.33% of change by  $122.50 \pm 19.97$  to  $125.25 \pm 12.86$  level of data. The standard deviation reduces in respect of pre data which shows that the SBP value enforces to become more closer to the normal range.

DBP shown 1.03% of change by  $79.30 \pm 11.61$  to  $79.65 \pm 9.48$  level of data. The standard deviation reduces in respect of pre data which shows that the DBP value enforces to become more closer to the normal range.

Saturation of peripheral Oxygen rate slightly improved form  $98.25 \pm 0.85$  to  $98.55 \pm 0.51$  with 0.31% of increasing change.

Pulse Rate became more normalize as the data form  $78.35 \pm 12.60$  to  $79.25 \pm 7.03$  with 2.73% of positive change. And the less Standard deviation of post data shows the less scatter-ness of data. So the pulse rate become more one pointed.

Pulse rate increased from  $78.35 \pm 12.60$  to  $79.25 \pm 7.03$  with 0.02731 of % change. So, the data became little bit of normalize with lowering the scattered-ness of the data.

**5.4 Neutral changes:** There are no neutral changes witness every organ reacted to the intervention in its way as discussed above. The information is true to the percentage of change in the present research even with lockdown life.

**5.5 Adverse effects:** There are no adverse effects means the safety of yoga nidra along with the few preparatory asana for the heterogenous group of employers.

**6. CONCLUSION:** Less improvement in cortical usage on DSST with much reduction in emotional exhaustion, professional efficacy and cynicism scores proves the less connections with emotional part of brain. Hence the addition of preparatory asana to general *yoga nidra* can help the workers to experience less burnout with in 21 days.

## 7. STRENGTHS

- The *yoga nidra* with preparatory asana also help to break the chain of disorders like; stress, anxiety, depression, psycho-motor imbalance & endocrine disorders.
- It also prepares a positive plot for one's social & emotional health.
- The *yoga nidra* also helps to deals with eagerness of life loosing tendency causes of the reinforce lifestyle.
- *Yoga nidra* have an instant effect by bringing the person in the deep sleep state. So, the impact and interest to doing so is good.
- The subject taken in this study, they always giving me daily feedback. So, in initial state they just going to asleep but after two or three session they can feel the instruction given by me. And they also can visualize the body parts, heaviness /lightness, cold/heat etc sensations.
- The five preparatory *asanas* is essentially removing the body pain due to work place situation. And the *asanas* generating an energy and bringing the mind to particular activity or *asanas*, so that while practicing the meditation the body instantly going to relax position. And the whole physical body use the extra energy to rejuvenate the body, mind, *pranic* flow or the five layers of sheath.

## 8. LIMITATIONS:

During the pandemic have to treat the subjects in online. And I face some barrier to take the data because of the lockdown restrictions. Two types of gender included in this study which may be a confounding factor for the study. And the different kind of occupational have different types of work load or burnout.

## 9. FUTURE DIRECTIONS

- Exploring the relation between yoga and occupation burn out. Also overlooking the dependency of cognitive dysfunction in the occupational burnout phenomena.
- Exploring yoga as an alternative procedure to every dimension of health as well as mental and social aspect. *Yoga nidra* is one of the best remedies to break the chain of stress-depression-anxiety related disorders. The endocrinal imbalances, gastro-intestinal disorders, obesity etc psycho-physiological imbalances are may be identify and cured through this yogic techniques which must be explore in future.
- The activities of different brain waves during the *yoga nidra* may be helpful to explore the brain activities, secretion, emotional explorations, deeper mechanism of cognition in the three states of consciousness.



## 10. REFERENCES:

1. Poghosyan L, Aiken LH, Sloane DM. Factor structure of the Maslach burnout inventory: an analysis of data from large scale cross-sectional surveys of nurses from eight countries [published correction appears in *Int J Nurs Stud*. 2014 Oct;51(10):1416-7]. *Int J Nurs Stud*. 2009;46(7):894-902. doi:10.1016/j.ijnurstu.2009.03.004
2. Mustafa, O.M. (2015). "Health behaviors and personality in burnout: A third dimension". *Medical Education Online*. **20**: 28187. doi:10.3402/meo.v20.28187. PMC 4568184. PMID 26365101
3. C Maslach, SE Jackson. The measurement of experienced burnout. - *Journal of organizational behavior*, 1981. <https://doi.org/10.1002/job.4030020205>
4. Bianchi, R.; Schonfeld, I.S. (2016). "Burnout is associated with a depressive cognitive style". *Personality and Individual Differences*. **100**: 1–5. doi:10.1016/j.paid.2016.01.008.
5. Schonfeld, I.S., Verkuilen, J. & Bianchi, R. (2019). An exploratory structural equation modelling bi-factor analytic approach to uncovering what burnout, depression, and anxiety scales measure. *Psychological Assessment*. <https://doi.org/10.1037/pas0000721>
6. Alarcon, G.; Eschleman, K. J.; Bowling, N. A. (2009). "Relationships between personality variables and burnout: A meta-analysis". *Work & Stress*. **23** (3): 244–263. doi:10.1080/02678370903282600. S2CID 144848431
7. Swider, B. W.; Zimmerman, R. D. (2010). "Born to burnout: A meta-analytic path model of personality, job burnout, and work outcomes". *Journal of Vocational Behavior*. **76** (3): 487–506. doi:10.1016/j.jvb.2010.01.003.
8. Parker S, Bharati SV, Fernandez M. Defining yoga-nidra: traditional accounts, physiological research, and future directions. *Int J Yoga Therap*. 2013;23(1):11-6. PMID: 24016819.
9. Chatterjee, Kallol. 15/06/2009. Effect of different durations of yoga nidra on selected psychomotor components after induced fatigue. <http://hdl.handle.net/10603/2733>

10. Sharpe E, Lacombe A, Butler MP, Hanes D, Bradley R. A Closer Look at Yoga Nidra: Sleep Lab Protocol. *Int J Yoga Therap.* 2021 Jan 1;31(1):Article\_20. doi: 10.17761/2021-D-20-00004. PMID: 33175980; PMCID: PMC8932407.
11. Eastman-Mueller H, Wilson T, Jung AK, Kimura A, Tarrant J. iRest yoga-nidra on the college campus: changes in stress, depression, worry, and mindfulness. *Int J Yoga Therap.* 2013;(23):15-24. PMID: 24165520.
12. Vaishnav BS, Vaishnav SB, Vaishnav VS, Varma JR. Effect of Yoga-nidra on Adolescents Well-being: A Mixed Method Study. *Int J Yoga.* 2018 Sep-Dec;11(3):245-248. doi: 10.4103/ijoy.IJOY\_39\_17. PMID: 30233120; PMCID: PMC6134739
13. Vidya L Anderson; Edward M Levinson; William Barker; Kathleen R Kiewra School Psychology Quarterly; Spring 1999.-- The effects of meditation on teacher perceived occupational stress, state and trait anxiety, and burnout. - PsycNET (apa.org) , <https://doi.org/10.1037/h0088995>
14. Birdsall, B., Pritchard, M., Elison-Bowers, P., & Spann, J. (2011). Does integrative restoration (iRest) meditation decrease perceived stress levels and negative moods in school counselors? Corpus ID: 141498885
15. Elder C, Nidich S, Moriarty F, Nidich R. Effect of transcendental meditation on employee stress, depression, and burnout: a randomized controlled study. *Perm J.* 2014 Winter;18(1):19-23. doi: 10.7812/TPP/13-102. PMID: 24626068; PMCID: PMC3951026.
16. Fang R, Li X. A regular yoga intervention for staff nurse sleep quality and work stress: a randomised controlled trial. *J Clin Nurs.* 2015 Dec;24(23-24):3374-9. doi: 10.1111/jocn.12983. Epub 2015 Oct 19. PMID: 26478577.
17. Riley KE, Park CL, Wilson A, Sabo A, Antoni MH, Braun TD, Harrington J, Reiss J, Pasalis E, Harris A, Cope S. Improving physical and mental health in frontline mental health care providers: Yoga-based stress management versus cognitive behavioral stress management. *J*

Workplace Behav Health. 2017;32(1):26-48. doi: 10.1080/15555240.2016.1261254. Epub 2016 Dec 16. PMID: 33354168; PMCID: PMC7751948.

18. Schaufeli WB, Leiter MP, Maslach C, et al. . The Maslach Burnout Inventory: General Survey (MBI-GS) En: Maslach C, Jackson SE, Leiter MP, editors. *Maslach Burnout Inventory Manual*. 30 edición, Palo Alto, CA: Consulting Psychologist Press; 1996. p. 19–26. [Google Scholar] [Ref list]

## 11. Bibliography

19. Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: an overview of 25 years of research in theorizing. In M. J. Winnubst, & C. L. Cooper (Eds.), *The handbook of work and health psychology* (pp. 383-425). Chichester: Wiley. ISBN 0-471-89276-9
20. Swami Satyanand Saraswati. *Yoga Nidra*. 6th ed. Edition. ISBN-13: 978-8185787121 ISBN-10: 8185787123.
21. Swami Venkatesananda, *The Supreme Yoga: Yoga Vasistha*. Motilal Banarsidass Publishers; 4th edition (1 January 2010). ISBN-13: 978-8120819757
22. Ruth Perini. *Shandilya Upanishad: Timeless Teachings on the Eightfold Path of Yoga: 6 (Yoga Upanishads)*. ASIN: B08C8Z8P77. ISBN-13: 979-8651008025
23. B.K.S. Iyengar. Thorsons (20 March 2006). *Light on Yoga: The Classic Guide to Yoga by the World's Foremost Authority*. ISBN-108172235011. ISBN-13978-8172235017.
24. Swami Satyananda and 1 more. *Asana Pranayama Mudra Bandha*. Yoga Publications Trust; Revised & Enlarged edition (1 January 1997). ISBN-108186336044. ISBN-13978-8186336045
25. Muktibodhananda Swami. *Hatha Yoga Pradipika*. Publisher Bihar School of Yoga; Reprint edition (1 January 1999). ASIN8185787387.
26. Rama, Swami (1982). *Mandukya Upanishad: Enlightenment Without God*. ISBN 978-0-89389-084-1.

27. Swami Niranjanananda Saraswati, Commentary on the Yoga Teachings of Maharshi Gheranda. Bihar School of Yoga; 1st Edition (1 August 2012. ISBN-10: 9381620199. ISBN-13: 978-9381620199.
28. Shrimad Bhagwat Gita (Saadhak Sanjeevani by Swami Ramsukhdasji) Part 1 & 2 Set - Romanized Edition with English translation. ASINB08DFFFWGS.
29. Swami Satyananda saraswati. Four Chapters on Freedom: Commentary on the Yoga Sutras of Patanjali. ISBN-108185787182 ISBN-13978-8185787183

## 12. Annexure:

### 12.1 Information of MBI-GS:

**Table 1.** Codes of the MBI-GS (Maslach Burnout Inventory-General Survey) instrument.

Item Code	Feeling That Represents
1 Totally exhausted	Exhausted emotionally
2 Exhausted	Finishing at the end of day
3 Fatigued	Fatigued at dawn
4 Stressed	Work is stressful
5 Resolve	Able to solve problems
6 Exhausted1	Exhausted by my work
7 Contribution	Make a contribution to work
8 Interest	Loss of interest
9 Enthusiasm	Loss of enthusiasm
10 Good	I'm good at doing my job
11 Carried out	I feel fulfilled
12 Value	Realized worthwhile things
13 Bothered	Do not bother me
14 Indifferent	I have become indifferent
15 Doubt	I doubt the value of my work
16 Efficacy	Effective in doing my job

Based on Moreno [41].

### 12.2 Copy of DSST :

DIGIT	1	2	3	4	5	6	7	8	9
SYMBOL	—	L	7	L	U	0	Λ	X	=

SCORE

SAMPLES

2	1	3	7	2	4	8	1	5	4	2	1	3	2	1	4	2	3	5	2	3	1	4	6	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

1	5	4	2	7	6	3	5	7	2	8	5	4	6	3	7	2	8	1	9	5	8	4	7	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

6	2	5	1	9	2	8	3	7	4	6	5	9	4	8	3	7	2	6	1	5	4	6	3	7
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

9	2	8	1	7	9	4	6	8	5	9	7	1	8	5	2	9	4	8	6	3	7	9	8	6
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Source: "Practice Tests: Intelligence, Ability, Personality, and Other Assessment Instruments" by John H. Bigler, Ed. Copyright © 2003 by Pearson Education, Inc. All rights reserved.



### 12.3 Original copy of Maslach burnout inventory

NEVER	A FEW TIMES PER YEAR	ONCE A MONTH	A FEW TIMES PER MONTH	ONCE A WEEK	A FEW TIMES PER WEEK	EVERYDAY
0	1	2	3	4	5	6

	0	1	2	3	4	5	6
1. In my work I feel emotionally exhausted							
2. I feel used at the end of a working day							
3. I feel tired when I get up in the morning and have to go to work							
4. Working with people all day causes me stress							
5. My work makes me exhausted							
6. I can effectively solve the problems that appear in the job							
7. I feel that I am effectively contributing to my institution's goals							
8. I am getting less interested since I started working							
9. I am getting less enthusiastic about my job							
10. In my opinion, I'm good at what I do							
11. I feel happy when I achieve something in my work							
12. In my work, I have been able to accomplish many things that are worthwhile							
13. I just want to do my job and don't bother me							
14. I'm getting more skeptical if my work contributes to anything							
15. I have doubt the meaning of my work							
16. In my job, I feel confident that I'm effective at getting things done							





**Annexure-12.5:** Sample Data collection form

**Informed Consent**

**Title: Yogic Protocol for dissolving occupational burnout & cognitive dysfunction among the office workers**

**Information to the participants:**

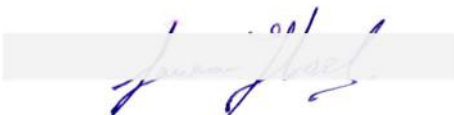
We are conducting a study to find of Yogic Protocol for dissolving occupational burnout & cognitive dysfunction among the office workers. This study is a part of the M.Sc. degree. Your consent will have very important role in this study. If you consent to take part in this study, the investigator will assess your present status by measuring the burnout level created by your occupation and the cognitive functions with the help of some questionnaires. Also, some minor physical assessments will be taken from you. The tests are expected not to cause any serious adverse effect on your physical or mental health. Please note that you have a right to refuse to take part in the study at any time.

**Consent:**

I have been informed about the procedures and the risks of the study. I have understood that I/We have the right to refuse my consent or withdraw it any time during the study without adversely affecting my treatment. I am aware that by subjecting to this investigation, I will have to give more time to assessments by the investigating team and that these assessments do not interfere with the benefits. I Mr. Sayamol Das, the undersigned, give my consent to be a participant of this investigation/study program.



Signature of the Participant



Signature of the Investigator