Chapter 1

INTRODUCTION

Yogaś citta vṛtti nirodah

- Patanjali Yoga Sutra 1.2

Yoga happens when there is stilling (in the sense of continual and vigilant watchfulness) of the movement of thought - without which there is no movement

sa tu dirgha kāla nairantaryā satkārā sevīto dṛdhaḥbhūmih

- Patanjali Yoga Sutra 1.14

But, when is one said to be well grounded in practice? When this spontaneous awareness or cosmic consciousness continues without interruption, for a long time, and one is devoted to it with all one's being, in all sincerity and earnestness.

avidyā smitā rāga dves bhīniveśāḥ kleśāh

- Patanjali Yoga Sutra 1.14

The mind is restless because of the many unresolved problems. The elements that disturb mental equilibrium and thus generate psychic distress are: ignorance of the truth concerning one's self or egotism which seems to be the obvious truth in ignorance, and the belief in the separative individuality, psychological and unnatural extension of attraction and repulsion which, as neurological phenomena are natural, and blind
clinging to the present physical "life", born of the ignorant division of timeless eternity into life and death\(^1\).

Philosophy is variously defined in the dictionary as a study of truth or the principles underlying all knowledge, or a study of the most general causes of universe, or a system guiding life. In this unit of study, it is both a product and process. As product it is a system of values. As a process it is a means of establishing that system of values. Thus, it becomes both means and an end. It tries to know things that are immediately and remotely concern of man. What is the real nature of man? What is the end of this life?

Philosophy deals with problems of the nature. The aim of Philosophy is to find out the knowledge of truth or study of the most general causes and principles of the universe\(^2\).

For better understanding we can study the Philosophy into two ways.

1. **Western Philosophy**- In this Philosophy we found that they concerned human knowledge about each of the different problems. branches of western Philosophy are mentioned below:
   - **Metaphysics**

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\(^1\) Patanjali's Vision of Oneness, An Interpretive Translation by Swami Venkatesananda. dailyreadings.com/ys1-1.htm  
• Epistemology
• Logic
• Ethics
• Aesthetics

2. **Indian Philosophy**-discusses the above branches but not separately. Every problem is discussed by the Indian Philosophers from all possible approaches. Indian Philosophy which only satisfied to its influencing devotion to the search for the truth. The Vedas are the earliest available records of Indian literature. On the basis of Vedas Indian Philosophy can be classified in two broad classes namely,

A. **Heterodox (Nastika)**-This class does not believe in the authority of Vedas. This class can be further divided into the following areas;

• Carvaka
• Buddha
• Jaina

B. **Orthodox(Astika)**-This class believes in the authority of Vedas. This class can be further divided into the following areas;

• Sankhya
• Yoga
• Nyaya
• Vaisesika
• Mimamsa
• Vedanta

If the philosophy is intellectual investigation, the Yoga is particularized experience. In Philosophy, the logical faculty is desired but in Yoga, devotional wisdom and purity of internal realization are the assets of the adherents. In Philosophy cognitive element reigns supreme but in Yoga, along with cognitive elements, affect and cognitive elements are also primarily needed. However it dose not mean that Yoga and Philosophy are poles apart because in Yoga that effort of wisdom for reaching the truth is inherent which evolutes into the spiritual experience and not that devotion which negates the intellect. Moreover, the Indian Philosophy is not only conceptual and linguistic analysis, it is rather that system of thought which is formulated by logical thinking attained through intuitive experience.

Yoga is a cultural heritage of India. It has long tradition. Yoga is a practical, methodical and a systematic discipline for unfolding the ultimate potentialities of mankind, handed down to us in the form of
living tradition which has been systematized around 2000 BC by the sage Patanjali in the name of Yoga sutra, commonly known as “Astanga Yoga”.

The term Yoga is derived from the Sanskrit root “Yuj” which stands for-

- To unite
- Put together or to integrate
- To restrain

Yoga is its noun form and means union. It is concerned with the union of the individual soul with the absolute or the divine soul. Sage Patanjali is the founder of this school of philosophical thought. The Yoga sutra is written by patanjali. Collecting materials scattered in the Vedas and the upanisads provide the basis of this philosophy. As a philosophical thought it comes very close to the Sankhya school of thought which considered all materials being in the universe as Prakiti and all providing super conscious sprite as Purusha.

In the modern era, the origin of yoga is not usually given much importance. While ‘yoga’ has now become a veritable household word, knowledge of its roots escapes most people, even many of those who claim to ‘practice yoga’ with regularity.
Sept 11, 1893, when Swami Vivekananda made his historic address to the World Parliament of Religions in Chicago, is often regarded as the beginning of the Modern Era in the history of yoga the point from which the movement of yogic concepts to the West swelled quickly into a powerful wave.

In little more than a century since then, yoga has seen an unprecedented rise in its dissemination worldwide. However, for the most part, its face has changed considerably from its ancient past. The ascetic values of ancient times - those of purity, simplicity and humility - have been all-but forgotten. Moral and ethical restraints have been caste aside in favour of contemporary cultural attitudes and mastery of desires and the discipline of the body, mind and emotions replaced with a mind-set of permissive indulgence.

Physical fitness, enhanced sexuality and personal achievement have become the primary goals of yoga practice. In modern time people become busier due to the fact of hectic life style –dependency on readily made food, non-indulgence in physical activities, choosing sedentary tools for happy home etc. have become common in every sphere of human existence. Stressful lives have been invited instead of active life style.
There are seven main causes of stress which are commonly discussed as under:

1. **Finances**

   Most studies agree that finances are a leading cause of stress. In an online poll conducted in 2005 by LifeCare, Inc., 23 percent of respondents named finances as the leading cause of stress in their lives. Financial stress has led the list in many modern polls. Some who name finances as the leading cause of stress cite major purchases they have to make, such as a home or car. Others are stressed by a loss of income, or mounting credit card debt. For some, financial stress will eventuate in bankruptcy. While college students stress over paying for an education, Baby Boomers and older senior citizens find that retirement income can be a major cause of stress.

2. **Work**

   Closely tied to finances as a cause of stress is work. Our jobs or careers seem to cause constant stress. In the Life Care poll, 21 percent of those responding listed this as the leading cause of stress in life. How is the workplace a cause of stress? We worry about getting and keeping adequate employment. We worry about new
types of work or new responsibilities. We struggle to climb a career ladder, overwhelmed by the demands. Work conditions may change, or we may have interpersonal trouble at work. Students, especially teenagers and college age students, cite school work as a cause of stress. Sometimes, work stress is brought on by others. Sometimes, we bring it on ourselves.

3. Family

Family, wonderful though each member may be, is also a leading cause of stress. Arguments erupt with a spouse or other family member. Parents divorce. Children marry. The ebb and flow of family life is filled with stress. A child moves out – an aging parent moves in. Family health is also a leading cause of stress. A sick family member, a serious injury, pregnancy, miscarriage, or abortion all cause stress. Family changes of other kinds bring stress, too. Adoption, relocation, and job changes for just one family member can cause stress for all.

Coronary heart diseases, arthritis and chronic fatigue are significant health problems for the aging population in most of the families. Studies indicates that that the happiest oldsters are those
who stay in there family communities and keep busy by carrying on regular physical, mental and creative activities.

4. **Personal Concerns**

Personal concerns that are only indirectly created by others are another top cause of stress. Lack of control tops the list of personal concerns. Every human has a deep-seated desire for control over his or her own life. When control is weak or missing in a given area, we experience stress. To many people, a lack of control over their own time is a leading cause of stress. We want to determine when we do tasks around the home, or at work. Holding a job, participating in the children’s carpool to school, driving family to soccer practices, shopping, and scout meetings while trying to keep the household running can create major stress. You would like to control your time, rather than let others’ demands control it, but that is not always possible. We may be involved in legal proceedings that cause stress. We may be wrestling with a bad habit. We may be going through changes. Personal change of any kind can be a cause of stress.
5. **Personal Health and Safety**

Most people find that personal health is a leading cause of stress. For some, the stress is linked to obesity, and a desire to lose weight. For others, the stress is a personal base habit that affects health and must be changed. For example, smoking, abuse of alcohol or other drugs. Illness or injury, whether less or more serious, can be a leading cause of stress for many people. Incontinence can be an ongoing concern. Personal health is more or less stressful according to the degree of seriousness and our personal outlook on health. Personal safety is also a leading cause of stress. Women, more than men, tend to stress about their own and others’ safety. Adults tend to stress more than young people, who may act invincible.

6. **Personal Relationships**

Whether it is a friendship, dating, separation, marriage, divorce, or re-marriage, a relationship can be a leading cause of stress for many. We all want love, and that is potentially available in relationships, but getting from A to B can be very stressful. Some resort to online relationships that are easier to handle. Others
withdraw and become recluses. Either way, the demands on time, finances, and emotions can cause ongoing stress.

7. Death

Probably the most wrenching cause of stress is the death of a loved one or close friend. Even the death of a pet can be stressful. Children are always a source of stress for parents, but when a child dies, the stress is overwhelming. The same is true when a lifetime spouse passes on.

8. Win or Lose

Causes of stress change as we age. The stressed child who threw tantrums becomes a young student, stressed by the school bully. The young student becomes a teenager, stressed by acne, hormones, and dating. The teenager becomes a young adult trying to handle the stresses of leaving home, adjusting to college life, and managing finances. Life progresses to first jobs, marriage, children, and so on. Even if you move to a secluded cabin in the woods, stress will follow you.

Managing the level of stress in your life is important because it not only can make you happier and more productive, but also healthier as well. Studies show that high stress levels can take a big toll on the body
that can catch up with you later in life. Some of the health problems that prolonged stress can cause include:

Yoga is panacea for stress disorders. It works wonderfully where innumerable tranquilising agents have failed miserably. Various Yogic practices not only help in removing these diseases but also improve the resistance of the body at the psycho-physiological state. Scientific researches have shown that Yogic practices can delay ageing and degenerating process, with the result that a person may remain active and energetic for a longer period of life.

**Immune system suppression:** The glucocorticoid hormones that are released during the long-term stress response suppress inflammation and the overall activity level of the immune system. This makes glucocorticoids a great treatment when an immune response is not desirable: professional athletes often get cortisone shots when they are injured in order to reduce pain and inflammation and allow them to continue to compete. However, over the long term, these hormones reduce the ability to fight off infection and can make you prone to repeated illness and may reduce your ability to fight off serious infections.
• **Ulcer aggravation**: While it is now known that stress does not cause stomach ulcers, it can aggravate ulcers that are already present.

• **Heart problems**: Over the long term, people who react more to stress have a higher risk of cardiovascular disease.

• **High blood pressure**: Also called hypertension, this common chronic disease is more prevalent in people who report high levels of stress. While high blood pressure itself usually does not have obvious symptoms, it raises your risk of heart attack, stroke, kidney failure, and heart failure.

• **Skin issues**: Stress is known to aggravate skin problems such as acne, psoriasis, and eczema. Stress may also cause some otherwise unexplained itchy skin rashes.

• **Pain**: Chronic stress can cause serious muscular pain such as shoulder pain, backache and tension headache.

• **Anxiety and depression**: In people who are predisposed, chronic stress can trigger clinical depression and/or anxiety, both debilitating mental disorders.
- **Certain chronic diseases**: Stress tends to aggravate the symptoms of several chronic diseases including multiple sclerosis, rheumatoid arthritis, and fibromyalgia.

- **Migraine**: Many people who suffer from migraine headaches say that stress contributes to their migraines.

- **Diabetes**: Some evidence suggests that chronic stress may cause type 1 diabetes in people who are already susceptible to the disease however more research needs to be done to better establish this link.

**Overview of Yoga**: Many of the popular techniques found to reduce stress derive from yoga:

- controlled breathing
- meditation
- physical movement
- mental imagery
- stretching
Yoga’s Effects On the Body: The following is only a partial list of yoga’s benefits:

- reduced stress
- sound sleep
- reduced cortisol levels
- improvement of many medical conditions
- allergy and asthma symptom relief
- lower blood pressure
- smoking cessation help
- lower heart rate
- spiritual growth
- sense of well-being
- reduced anxiety and muscle tension
- increased strength and flexibility
- slowed aging process

Yoga’s benefits are so numerous; it gives a high payoff for the amount of effort involved.

The practice of yoga involves stretching the body and forming different poses, while keeping breathing slow and controlled. The body
becomes relaxed and energized at the same time. There are various styles of yoga, some moving through the poses more quickly, almost like an aerobic workout, and other styles relaxing deeply into each pose. Some have a more spiritual angle, while others are used purely as a form of exercise.

Virtually everyone can see physical benefits from yoga, and its practice can also give psychological benefits, such as stress reduction and a sense of well-being, and spiritual benefits, such as a feeling of connectedness with God or Spirit, or a feeling of transcendence. Certain poses can be done just about anywhere and a yoga program can go for hours or minutes, depending on one's schedule.

Yoga Nidra is a systematic method of inducing complete physical, mental and emotional relaxation. The term Yoga Nidra is derived from two Sanskrit words; Yoga means Union or one-pointed awareness. For this reason, Yoga Nidra is often referred to as psychic sleep or deep relaxation with inner awareness in this threshold state between sleep and wakefulness contact with the subconscious and unconscious dimensions occurs spontaneously.

In Yoga Nidra, the state of relaxation is reached by turning inwards, away from outer experiences if the consciousness can be separated from
external awareness and from sleep it becomes very powerful and can be applied in many ways, for example to develop the memory increase knowledge or transform one nature.

In the Raja Yoga of Patanjali there is a state called Pratyahara where the mind and mental awareness are dissociated from the sensory channels. Yoga Nidra is one aspect of pratyahara which leads to the higher states of concentration and Samadhi.

The characteristic feature of Yoga Nidra was the systematic rotation of consciousness in the body, which originated from the tantric practice of NYASA (meaning to place or to take the mind to that point) NYASA, was practiced in a sitting posture and involved the use of specific mantras which were placed, felt or experienced at different parts of the body. First, the name of the part was recited, then it was visualized or touched, and the mantra was placed there. NYASA was a means of consecrating the physical body by instilling higher awareness or divine consciousness into the various parts during tantric ritual practices. For example, the Angushtadi Shadanga-nayasa was used to place mantras in the hand as follows\(^3\)

Thumb – Harm Angusthabhyam Namah.

\(^3\) Swami Satyananda Saraswati Yoga Nidra, (Yoga Publication Trust, munger), p.3
In similar manner, in the Hridayi-Shadanga-nyasa, certain mantras were placed at the various parts of the body.

The present form of Yoga Nidra enables people who are unfamiliar with Sanskrit mantras to gain the full benefits of the traditional nyasa. It can be beneficially practiced by people of any religion or culture. The practice of Yoga Nidra is divided into the following stages:

1. **Preparation**: Yoga Nidra is performed in the posture of shavasana, with the eyes closed. In this stage, initial relaxation of the body and mind is induced by the awareness of stillness, comfort, posture, position, breath, and listening to the external sounds with the attitude of a witness.

2. **Sankalpa**: When the body and mind are relaxed, then the practitioner is instructed to take a resolve according to his or her own wish. The sankalpa should be short, clear and positive. The practitioner repeats the selected sankalpa three times mentally, with full determination, conviction and confidence.

3. **Rotation of consciousness**: In the third stage, the awareness is rotated around the different body parts in a systematic and organized manner. The practitioner is instructed to remain aware, to listen to the instructions and to move the mind very rapidly according to the instructions without making any physical movements. The rotation of awareness in Yoga
Nidra follows a definite sequence: right side of the body, beginning with the right hand thumb and ending with the little toe of the right foot; left side of the body, from the left hand thumb to the little toe of the left foot; back of the body, from the heels to the back of the head; and lastly the front of the body, from the forehead and individual facial features to the legs.

4. **Breath awareness**: In this stage, one simply becomes aware of the natural breath without making an attempt to change the flow of the breath. One may become aware of the breath by watching it in the nostrils, chest, and abdomen, or in the passage between the navel and the throat. The practitioner becomes aware of each incoming and outgoing breath by counting them mentally.

5. **Opposite feelings and sensations**: In this stage, the physical or emotional sensations are recalled, intensified and experienced fully. Usually this is practised with pairs of opposite feelings or sensations like heat and cold, heaviness and lightness, pain and pleasure, love and hate, and so on.

6. **Visualization**: In the stage of visualization, the awareness is taken to the dark space in front of the closed eyes, referred to as chidakasha in
yogic terminology. The practitioner is then instructed to visualize some objects, stories or situations in the chidaksha.

7. **Sankalpa**: Once again the sankalpa, taken in stage two, is repeated mentally three times in this stage with full dedication, faith and optimism.

8. **Ending the practice**: Before ending the session of Yoga Nidra, slowly the awareness is externalized by asking the practitioner to become aware of the external sounds, objects and persons. They are asked then to slowly move the body parts and to stretch the body.

The formation of a course of fundamentals of sports training has resulted from an ever interesting acceleration in development of the scientific and practical knowledge in the field of sports and one of the national expression of the process of differentiation and integration characteristics of any developing branch of science.

Athletic competition represents the classical test of physical, physiological and mental fitness performance capacity. An individual performance depends upon the combined result of coordinated exertion and integration of variety of functions. In order to achieve top performance and develop championship qualities, the demand of actual events must be perfectly matched by individual’s capabilities.
"Physical Education and sports are mainly based on motor skills, the psychomotor components are of great concern to physical activities, the psychomotor is concerned with muscular activities, into those movements of the body limbs or other body parts necessary for a given action. The psychomotor ability of an individual is an increasingly complex coordination of eyes, hand and mind."\(^4\)

"Movement represents the key concern of physical education; movement is the central focus of this field of endeavor. Physical Educator strives to help human beings to move efficiently, to increase the quality of their performance, to enhance their ability to learn, and to promote their health."\(^5\)

"Psychomotor concerned with voluntary human movement domain including motor skill and fitness, one of the most well known arrangement in the psychomotor domain has been presented by Barrow, all human movement has been classified into six hierarchical arrangement with six level or categories these are (i) reflex movement, (ii) basic fundamental movement, (iii) perceptual ability, (iv) Physical ability, (v) skilled movement, (vi) non discursive communication. The first two levels are


genetically based in the individual the second two levels provide for the myriad of movements and behaviors of a general nature. The third dual level includes the more specialized movements for learning and performance.\textsuperscript{6}

Psychomotor ability which is concerned with voluntary human movement, which is observable and directly associated with muscular action or motor skills are important components which help the physically disabled. Psychomotor components are required to perform any work.

"In teaching for psychomotor learning the physical educator is concerned with the development and improvement of motor skill. This type of learning is the heart of the physical education and sports experiences. The focus of psychomotor learning is on the acquisition of motor skills. This includes both fundamental motor skills as well as selective skills in various physical education activities geared to the age, maturation level, and physical condition of each individual.\textsuperscript{7}

Psychomotor learning has been characterized as relating to organismic and situational factors necessary for the acquisition and performance of behaviors that are generally reflected by movement. Psychomotor skills include actions such as contacting, manipulating, or

\textsuperscript{6}Harrold M. Barrow. \textit{Man and Movement} 3\textsuperscript{rd} Ed. (Philadelphia Publication. 1983). P.42.

\textsuperscript{7}D.A. Wuest and Charles A. Bucher. \textit{Foundation of Physical Education and Sports} 2\textsuperscript{nd} Ed. (Mosby Publication. 1995). P.98
moving an object and controlling the body or parts of the body. These types of motor skills require a great deal of information processing preferred to use “skill” to encompass “motor,” “perceptual-motor,” or any other term to cover the broadest behavioral definition of learning involving the use of movement. There is virtually no difference between “intellectual” “psychomotor” implies that the “domain” is more a convenient heuristic rather than an independent entity.

**Taxonomy of the Psychomotor Domain**

<table>
<thead>
<tr>
<th>Process Requirements</th>
<th>Acquisition</th>
<th>Automaticity</th>
<th>Transfers Near term</th>
<th>Transfer Far Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Domains</td>
<td>Learning elements of a new knowledge domain (e.g. acquiring nomenclature)</td>
<td>Integrating and applying elements and procedures through extensive repetition (i.e. automating skills)</td>
<td>Developing ability to generalize and apply principles and strategies (e.g. heuristics within a domain)</td>
<td>Learning to discover new principles in a domain (e.g. creative thinking, problem solving)</td>
</tr>
<tr>
<td>Psychomotor</td>
<td>Learning basic procedures (e.g. letter indentation on keyboard), Practicing the elements of the basics (e.g. typing letters etc)</td>
<td>Repetitive or automated skills (e.g. practicing typing procedures for automaticity, practicing competitive running)</td>
<td>Strategy or planning skills (e.g. playing football, defensive driving)</td>
<td>Inventing a new strategy or skill (e.g. use of the curve ball in baseball)</td>
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In relation to human performance, fatigue is one of man's most perplexing problems. Fatigue may be defined as a subjective state in which one feels tired or exhausted, and in which the capacity for normal work or activity is reduced. There is, however, no commonly accepted definition of fatigue when it is considered in the context of health and illness. This lack of definition results from the fact that a person's experience of fatigue depends on a variety of factors. These factors include culture, personality, the physical environment (light, noise, vibration), availability of social support through networks of family members and friends, the nature of a particular fatiguing disease or disorder, and the type and duration of work or exercise. The experience of fatigue associated with disease will be different for someone who is clinically depressed, is socially isolated, and is out of shape, as compared to another person who is not depressed, has many friends, and is aerobically fit.

Fatigue, in physiology, inability to perform reasonable and necessary physical or mental activity. When the metabolic reserves of the body are exhausted and the waste products increased, as for example after prolonged exertion, the body finds it difficult to continue its function and activity. The accumulation of lactic acid in muscle tissue and the
depletion of glycogen (stored glucose) results in muscle fatigue. The contractile properties of muscle are reduced, and continued exertion is impossible unless the muscle is allowed to rest. In the normal body a period of rest permits redistribution of nutritive elements to the muscles and tissues and elimination of accumulated waste products; the body is then ready to resume activity. There are some persons in whom fatigue is a chronic state that does not necessarily result from activity or exertion. Fatigue a major permanent limiting factor of sport performance as well as an important pathogenetic risk, Bartlett⁹ in agreement with other researchers, has stated that fatigue is term which is used to cover all those desirable changes in expression of an activity which can be treated to continue exercise under its normal condition, which can be lead either immediately or after delay to deterioration in expression of that activity or simply to result within the activity are not wanted, quote a number of research studies have been conducted in the area of fatigue and human performance but still more remain to be explored¹⁰.

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¹⁰ Description Columbia Encyclopedia:
Albert\textsuperscript{11} reported fatigue to determine or to subsequent performance improvements but not so in the case of the amount of learning.

Davey\textsuperscript{12} reported that it is common observation that many athletes under apparent influence of fatigue make wrong at a critical stage, thus lowering the standard of their performance.

Stockard\textsuperscript{13} has emphasized that in vigorous sports where physical fatigue is a factor, practice may best be held under condition of physical fatigue which stimulates the actual game conditions. More over an athlete must recognize fatigue and accept it as inevitable (for both athlete and opponent) and then learn to ignore it or at least adopt a callous attitude towards it. A physical output can be maintained long after the initial outset of fatigue symptoms; provide the athlete trains with this end insight. Specific training improves the aerobic power and an increased accumulation of lactic acid in the blood. Training also improves anaerobic capacity there by improving the glycolytic capacity with increased capacity for lactic acid tolerance on the part of the athlete. One who is superior in these qualities then he will certainly perform better.

\textsuperscript{12} C.P. Davey. "Physical Exertion and Mental Performance". \textit{Ergonomics} XVI (1973), 595-599.
\textsuperscript{13} Jermy R. Stockard. "Effect of Different Levels of Physical Fatigue Upon Motor Learning and Subsequent Motor Performance", \textit{Abstract Research Paper} (Hosten AAPHER, 1973), 101
Burke\textsuperscript{14} concluded that physical exertion does influence the
dynamic balance.

Marshall\textsuperscript{15} postulated that the Kinesthesiа deteriorates by
preliminary unrelated exercise.

It is a matter of great concern that an organism always behave as an
unified whole and not as a series of differentiated parts, what happens in a
part effect the whole.

In the modern scenario, human life has become very fast, hectic and
demanding. The present lifestyle demands adjustment on the part of the
individual. Each of us, as per our coping resources, tries to adjust in this
changing world. Some adjust by becoming overactive and others by
withdrawing from the situation. When we fail to make a proper
adjustment according to the demands of the situation, a state of negative
stress or distress develops in our personality, which gives rise to mental or
psychological problems. In most people the mind always remains in a
state of arousal and tension. Yoga Nidra, as a technique of pratyahara, not
only provides relaxation to the body and mind but also has a number of
benefits.

\textsuperscript{14} Thomas R. Burke. "The Effect of Physical Exertion on Dynamic Balance". Abstract of
Research Paper (Houston AAPHERD 1972), 50.

\textsuperscript{15} Theodore R. Marshall, "The Immediate Effect of Fatigue Upon Selected Measures of
Kinesthesiа in Junior High School Boys", Completed Research in Health, Physical Education and
Hence research scholar conceptualized to experiments with as systematic organized programmed of Yoga Nidra to find out its efficacy for recovery from induced fatigue under control conditions on some critical perception based specific movements also known as psycho motor components. Keeping this as primary purpose of this research project, the study was “effect of different duration of Yoga Nidra on selected psycho-motor components after induced fatigue.

Statement of the Problem

The purpose of the study was to investigate the effect of different durations of yoga nidra on selected psycho-motor components after induced fatigue.

Sub Problem

The another purpose of the study was to investigate which duration of Yoga Nidra was most effective for recovery of particular psycho-motor components after induced fatigue.
Delimitations

1. The study was delimited to 30 male professional physical education students.

2. The study was confined to the following psychomotor components.
   a. Speed of Movement
   b. Hand Steadiness
   c. Reaction Time
   d. Balance Ability
   e. Orientation Ability

3. The study was further delimited to induced physical fatigue by treadmill running under submaximal intensity.

4. The study was further delimited to experimentation of different duration of Yoga Nidra.

Limitations

Non-available of sophisticated instrument were considered as limitation for the purpose of study.
Hypotheses

On the basis of related literature and scholar’s own understanding of the research problem it was hypothesized that

1. Yoga Nidra would significantly affect recovery rate of psychomotor performance from induced physical fatigue.

2. The recovery pattern of different duration of Yoga Nidra on psychomotor performance would significantly differ.

Definition and Explanation of Terms

Yoga Nidra

Yoga Nidra is a technique which can be used to awaken divine faculties, and is one of the ways of entering Samadhi. In the path of Yoga Nidra we use awareness of the physical dimensions to amplify the inner vision and awareness. By the practice of raja yoga techniques, particularly Yoga Nidra, we try to become aware of the subconscious and unconscious states and ultimately to enter the state of super consciousness\(^{16}\).

Yoga Nidra is one of the practices of pratyahara where the awareness is internalized. Literally, Yoga Nidra means 'psychic sleep' i.e,

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\(^{16}\) Swami Satyananda Saraswati Yoga Nidra, (Yoga Publication Trust, Munger), p. 59.
sleep with full awareness. In the practice of Yoga Nidra the body sleeps but the mind remains awake listening to the instructions. In psychology, the state achieved in Yoga Nidra is termed the hypnologic state, a state between sleep and wakefulness. Yoga Nidra has its origin in the ancient tantric practice called nyasa.

**Psychomotor Components**

In term psychomotor is concerned with voluntary human movement, which is observable. Psychomotor components are the components directly associated with muscular action or motor skill. Some manipulation of materials and objects and some act requiring non-muscular coordination.

Science physical education and sports activities are mainly based upon motor skills, the psychomotor components are great concern to physical educations and coaches, most of the sports task require a high degree of development of psychomotor components especially speed of movement, hand steadiness, reaction time balance ability and orientation ability.
Fatigue

Fatigue is a term used to cover all those discernable changes in the expression of an activity which can be traced to the continuing exercise of that activity under its normal conditions, which can be shown to lead deterioration in the expression of that activity or more simply, to results within the activity that event wanted.\(^{17}\)

Speed of Movement

Speed of movement has been defined as the rate of which a person propels parts of his body through space. It refers to the time taken from the presentation of stimulus to the completion of a small movement and it's equal to the sum of reaction time and movement time\(^{18}\).

Hand Steadiness

Hand steadiness is a measure of motor control in the present study it is expressed in the form of value of hand shakiness as measured by steadiness testers.


Reaction Time

According to Morehouse and Miller\(^{19}\) reaction time is the time elapsing between movement of application of the stimulus and movement response.

Reaction time refers to the ability of an individual to respond to an external stimulus i.e. the time from the occurrence of a stimulus to the completion of a simple muscular contraction is called reaction time.

Balance Ability

“Balance is the ability to maintain body position which is necessary for the successful performance of sport skill”\(^{20}\).

Orientation Ability

“Orientation ability is the ability to analyze and change position and movement of the body in space and time related to a defense action”.\(^{21}\)

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\(^{19}\) Laurence E. E. Morehouse and Augustus T. Miller, *Physiology of Exercise*, P. 46


Significance of the Study

Since the primary purpose of the study was to experiment with the efficacy of Yoga Nidra as a relaxation technique to recover from induced fatigue from specific intensity of exercises, findings of the study will obviously through light on how Yoga Nidra will affect the recovery processes from fatigue.

Since the experimentation involved induced fatigue, the effect of induced fatigue on criterion parameters will also be known. In addition the findings will reveal the fact whether yogic practices such as Yoga Nidra can be adopted or advocated as a scientific relaxation technique. Research scholar is of opinion that this study is significant in terms of followings ways also.

1. The study will reveal in detail how Yoga Nidra affects Nervous system functioning process.

2. Further the study will critically explore how physical movements are associated with sensation and perception process.

3. The findings of the study will provide in-depth understanding about Yoga Nidra relaxation effects which will be of great help
for coaches in planning and preparing systematic training programmed.

4. In this study the effect of induced fatigue and recovery is experimented on five critical perceptual based specific movements that is Speed of Movements, Hand Steadiness, Reaction Time, Balance Ability and Orientation Ability. Hence the findings will provide a scientific understanding about which particular psycho motor parameters is affected by induced fatigue in which pattern and to what extend will be very specifically known.

5. Further in this study, different durations of Yoga Nidra which will be experimented and hence which particular durations of Yoga Nidra will be most effective for recovery of particular psycho motor performance will be known.

6. This research investigation will definitely add to the existing literature of research in physical education, health, sports training and Yogic science.

7. The study will open new research trends to experiment with other form of yogic relaxation technique on relaxation parameters.