

CHAPTER I

Introduction

- 1.1.1 Meaning of Yoga
- 1.1.2 Aspects of Yoga
- 1.1.3 Classification of Yoga
- 1.2.0 Statement of problem
- 1.3.0 Delimitation
- 1.4.0 Definition and explanation of the term
- 1.5.0 Objectives
- 1.6.0 Hypotheses
- 1.7.0 Need and significance of the study

CHAPTER I

Introduction

Yoga today is a subject of world wide interest. This is, indeed a wholly, new and remarkable phenomenon in the long history of Yoga. Until only a few years ago, Yoga used to have a limited appeal. It had little meaning for the common man busy in the routine of daily life. Those who understood it were very few, and fewer still practiced it. In order to study Yoga, one had to renounce the world of achievement, desire and enjoyment. Yoga was taught and practiced in remote places called "Ashrams" under the direct supervision of a "Guru".

This view of Yoga practice has recently undergone vast changes. Yoga is no more regarded as a discipline to be followed only by those who have set 'emancipation' as the highest goal of their life. It is now a subject which interests the man in the street. The factory worker, the office-goer, the housewife, the business executive, the student, and the teacher, have all alike found Yoga (some dimensions) to be useful in their daily life. Yoga has come out of its secret 'hiding place'. It has crossed the boundaries of its land of origin and has spread to practically every nation of the world. The popularity of Yoga has not been hindered by the diversity of religious beliefs, languages or geographic conditions.

One often wonders as to how such a sudden and widespread revival of interest in the age-old practices of Yoga has come about. The reason for the growing universal interest in Yoga in our day is twofold. The popular and conventional means of solving human problems have been found to be increasingly inadequate, the need for a new approach is being felt more and more. Yoga provides answers to some of our immediate and distant problems better than anything else is increasing.

In a sense, Yoga is an applied science. It can establish the lost balance in human affairs caused by the one sided growth of science. Unlike religion

it does not clash with scientific knowledge and unlike science, it does not remain silent on the issue of the goal of human life and the way to achieve it. *Yoga can thus overcome the shortcoming and both science and religion and can fulfill thereby the much felt need of establishing harmony, balance, and peace in the life of man-* a need which has arisen from the rapid progress of science in the wake of inner poverty and backwardness. By enriching our minds, by giving rise to wisdom and by controlling our savage animal instincts Yoga can make us better suited to our scientifically developed, complex external world.

Yoga has not been used widely as a therapy, although the basic principles of its application have been known for a long time. This is especially true of Hathayoga which is a way of achieving perfect health of all parts of the body and influencing breathing and other functions going on in it, and through them bringing about perfect harmony in mental and physical activity. In the past two or three decades, however, this system of Yoga has gained considerably popularity.

Hathayoga consist of such practices as Asanas, Pranayama, Mudras, Shuddhikriyas and Meditation. All these have proved to be of great help in the treatment of certain ailments as shown by scientific investigation carried out in India and elsewhere.

Yoga helps in the overall development of the personality of people. The concept of positive health and lifelong learning are relatively new concept, which need to be promoted. An overall development of the individual is intended to be achieved through higher education using an affective domain in addition to cognitive skills. Shri Kumar Swamiji in his book strongly feels that yoga aims at recreating the world. Not the acceptance of the world as it is, but to change it, to mould it in the pattern of the divine reality, is the main objective of Yoga.

In Yoga the total eradication of evil from the world and human nature, with a remoulding of terrestrial life in the pattern of the divine reality, is viewed not as a mere concept but as a concrete fact.

Yoga deals with the problems of human nature and human psychology through a vast repertory of practical methods which aim towards purification, regulation and awakening of human potential. At present, Yoga is passing through a momentous period of growth consolidation and expansion with its rapid integration into modern society. Many institutions dealing with the theory of Yoga and its practice have come up. At many levels we can see changes and new developments as Yoga is being applied in different facets of life in a variety of new ways, such as a form of therapy, a technique of health and stress management.

The current mechanistic world view, the matter based approach the increased dependence on science and technology and the associated lifestyle have to undergo basic changes towards embracing a more holistic world view and a healthier and more harmonious lifestyle, Emotion training and harnessing of the will-power the growth of the right side of the brain in general - are then the associated adjuncts for such a holistic understanding and also for a healthier and harmonious living. And that is what yoga offers.

Life of students in higher education is becoming more and more artificial and they are traveling more and more away from natural living. In order to return to natural life, they should practice Yoga and learn to live more in consonance with nature and cosmic consciousness.

We see the disinterest and inevitable suffering among many students. It has been realized that every individual contains hidden potential, which when developed allows him to attain pertinent bliss, inner peace and the ultimate goal of our existence.

A brief discussion with students revealed the following problems of students in the system of higher education -

1. Lack of interest in studies,
2. Lack of vitality, enthusiasm and eagerness,
3. Enamored by affluent environment leading to alcoholism, smoking, gambling etc.,
4. Irregular in food habits,

5. Not interested in exercise and games,
6. Drudgery in life,
7. No aim in life,
8. Lack of reading habits,
9. Not following any regular course of life,
10. Full of tensions, worries and agitations,
11. Lack of peace - restlessness,
12. Lack of concentration,
13. Problematic both at home and in a college,
14. Bad company and,
15. Aimless life.

How can we overcome the problems inflicting the problems inflicting the personality of students in higher education system ? How can we channelise their potential energy into kinetic energy to make them enjoy the bliss of life? How can we stimulate students towards holistic approach? How can we make them develop their personality in totality? How can we educate them to put them on right track? The only answer is the need of imparting Yoga education which can solve all the problems simultaneously. It requires understanding and practice of science and practice of yoga.

First let us understand the meaning of yoga.

1.1.1 Meaning Of Yoga

Patanjali defines Yoga as complete suppression of all mental modes or process (chittavrttirodha). Vyasa defines it as absorptive concentration (samadhi). It is a universal attribute of the mind. All person can attain yoga by repeated practice (abhyasa) and detachment (vairagya).

Swami Satyananda Sanswati in his book comments that, Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is the essential need of today and the culture of tomorrow.

The word Yoga is derived from the sanskrit root 'Yuj' that means 'to unite', 'to combine' and 'to integrate' which means total integration of the physical, mental, intellectual & spiritual aspects of the human personality. Yoga is the way of life, propounded by Patanjali in a systematic form.

Yoga is an exact science. It aims at the harmonious development of the body, the mind and the soul. Yoga is turning away of the senses from the objective universe and the concentration of the mind within. Yoga aims at controlling the mind and its modifications. The path of Yoga is an inner path whose gateway is your heart. Yoga is harmony between the individual and the cosmos, between thought and action, between soul and god; between organism and respiration.

Yoga is the discipline of a mind, sense and physical body. Yoga helps in the co-ordination and control of the subtle force within the body. Yoga brings in perfection, peace and everlasting happiness; one can even have increased energy, vigor, vitality, longevity, resistance, calmness and good sleep at times by the practice of Yoga. The practice of Yoga will help people to control the emotions and passions and resistance power increases and removes the disturbing elements from mind. It will enable them to keep a balanced mind and remove fatigue and get concentration, self-sufficiency, impertinence, pride, luxury, name, fame, self-assertive nature, abstinence, idea of superiority, evil company, laziness, over eating, meat eating, over work, attachments, too much talking, smoking, drinking are some of the obstacles in the path of Yoga.

Swami Paramhansa Niranjanananda in his book, writes that the aim of Yoga is to take one from the impure aspect of the mind towards the pure aspect, from a state of scattered desire to a state of balanced

desire, where the desire becomes positive, constructive and self elevating, where the desire does not limit us to the external environment only, but also encompasses the inner dimensions. By transcending the impure mind and obtaining purity of mind and by awakening the faculties of the pure mind, one attain transcendence or mukti one must go from the impure to the pure, and awaken the faculties of the pure mind in order to attain transcendence.

1.1.2 Aspects Of Yoga

The Yoga sutras serves as the basic text for an in depth study on this great science. Patanjali called it Ashtanga Yoga i.e., science having eight limbs or constituents, viz.,

1. Yama
2. Niyama
3. Aasana
4. Pranayama
5. Prathyahara
6. Dharana
7. Dhyana
8. Samadhi

- **Yama** : Yama consist in non-injury (ahimsa), truthfulness in thought and speech (staya), non-stealing (asteya), sexual restraint (brahamcharya), and non-acceptance of unnecessary gift. These are negative virtues.

Yama is based on the principle that above all religions, human religion is the best. Abstineneces - Ahimsa (Non-injury), Satya (Non-Falsehood), Asteya (Non-stealing), Aparigraha (Non-acceptance or non-hoarding of things beyond our bear

necessities of life) and Brahmacharya (Non deviation from one's own personal laws of nature).

- **Niyama** : There are the observances - Shoucha (purity), Santhosha (contentment), Tapas (austerity), Swadyaya (self study), Eswara pranidhana (Total surrender to the supreme).

This is a great psychological truth discovered by the Yoga system long ago. Mackenzie says, "It is generally better to escape from our defects, not by thinking about them and trying to elude them, but by fixing our attention on the opposite excellences. It certainly seems a more effectual method as a rule to expel our evil propensities by developing good ones rather than by seeking directly to crush the evil ones.

- **Asanas** : This involves practice of physical postures for correcting any deformities or physical ailments. Hathayoga texts claims that there are as many as 8400000 postures.

The third discipline is bodily posture (asana). It is a steady and pleasant posture of the body. It should not move. It should not be painful. It should not distract the mind. There are many kinds of postures, padmasana, virasana, bhadrasana, svastika, and the like. The various postures of the body are the means of controlling it and keeping it healthy and fit. They tone up the nervous system. They can be learnt from experts. The control of the body is the basis of the Yoga discipline.

They are controlled by means of practice and non-attachment. Practice is the repeated effort to follow the discipline which give permanent control of the thought waves of the mind. Practice becomes firmly grounded when it has been cultivated for a long time, uninterruptedly, with earnest devotion.

The practice of Yoga prevents psychosomatic disorders/diseases and improves individual's resistance and

necessities of life) and Brahmacharya (Non deviation from one's own personal laws of nature).

- **Niyama** : There are the observances - Shoucha (purity), Santhosha (contentment), Tapas (austerity), Swadyaya (self study). Eswara pranidhana (Total surrender to the supreme).

This is a great psychological truth discovered by the Yoga system long ago. Mackenzie says, "It is generally better to escape from our defects, not by thinking about them and trying to elude them, but by fixing our attention on the opposite excellences. It certainly seems a more effectual method as a rule to expel our evil propensities by developing good ones rather than by seeking directly to crush the evil ones.

- **Asanas** : This involves practice of physical postures for correcting any deformities or physical ailments. Hathayoga texts claims that there are as many as 8400000 postures.

The third discipline is bodily posture (asana). It is a steady and pleasant posture of the body. It should not move. It should not be painful. It should not distract the mind. There are many kinds of postures, padmasana, virasana, bhadrasana, svastika, and the like. The various postures of the body are the means of controlling it and keeping it healthy and fit. They tone up the nervous system. They can be learnt from experts. The control of the body is the basis of the Yoga discipline.

They are controlled by means of practice and non-attachment. Practice is the repeated effort to follow the discipline which give permanent control of the thought waves of the mind. Practice becomes firmly grounded when it has been cultivated for a long time, uninterruptedly, with earnest devotion.

The practice of Yoga prevents psychosomatic disorders/diseases and improves individual's resistance and

illumination of the sattava of the mind. It removes the demerit which observes discriminative knowledge. Breath control is the supreme austerity. It purges the mind of impurities and generates illumination of knowledge.

This is a reference to the practice of pranayama as a method of purification. Regulation of the breath gives control over the thought waves, for control of breath is directly related to control of mind. There are many pranayama exercises, each of which has a special effect on the autonomic nervous system and the psyche.

The habit of shallow breathing is one of many unnatural habits that modern civilization world only babes can breathe in a natural way. Shallow breathing is directly or indirectly responsible for a number of physical and mental diseases ranging from nervous disorders to common colds. To function properly the brain requires three times more oxygen than the rest of the body. If it does not get its due allotment, it exacts it from the body supply. That is why brain workers often possess a poor physic and a bad health. Deep breathing not only nourishes the whole system but also cleanses it.

Prana is not more breath but it is cosmic energy. It is a life giving principle which pervades the whole atmosphere. It is manifested in every form of existence - organic and Inorganic. By breathing exercise it is possible to raise the degree of circulation of prana in the body. The surplus of Prana is stored in the solar plexus which is the battery of human body.

- **Prathyahara:** If the mind is withdrawn from external sensible objects, the external senses are automatically withdrawn from them. They do not follow their objects, but they follow the mind. They are fixed on those objects only on which the mind is fixed. The restraint of the external senses depends upon the

restraint of the mind. It can be acquired by repeated practice, resolute will, and sense control.

The five disciplines of restraint (yama), observance (Niyama) bodily posture (asana), breath-control (Pranayama) and sense-control (Prathyahara) are the external aid to Yoga (bahirangasadhana). The last three disciplines, fixation of mind (dharna), meditation (dhyana) and absorptive concentration or ecstasy (Samadhi) are the internal aids of yoga (anlarangasadhana). They directly lead to conscious ecstasy (samprajnata samadhi).

- **Dharna:** This involves concentration of mind, it is true that the main stumbling block in increasing our knowledge is lack of concentration. The ever - increasing aberration in the mind with the advent of age would really worsen the situation unless the mind is cultured through Yogic techniques. Everything is possible to those who can concentrate and so we are encouraged to preserve, to break through the barriers of ordinary sense perception and to press forward fearlessly in our search for inner knowledge. The physical strength gained in a gymnasium can be used later for practical purposes. The mental strength gained through these exercises in concentration can be used for the most practical purpose of all; to unite ourselves with the Atman.
- **Dhyana:** Dhyana involves relaxed dwelling of the mind for a longer duration on the object of meditation. Fixation of attention on an object to the exclusion of other objects leads to meditation, if the cognition produced by it continues unbroken for a long time. There is a continuous stream of similar cognitions of the contemplated object undisturbed by dissimilar cognitions.

- **Samadhi:** The meditation involves the continuous flowing of mind energy and steady focusing on the object of meditation effortlessly for a longer and longer time. The very essence of yoga is merger of individual soul with that of universal soul, a state of super consciousness. This essence is achieved through samadhi only. Fixation (dharana), meditation (dhyana) and the absorptive concentration (samadhi), on the same object together are called samyana. They are the internal aids (antarangasadhana) to conscious ecstasy, while restraint, observance, bodily posture, breath control, and withdrawal of the senses from their objects are the external aids (bahirangasadhana) to it. But they are the external aids to super conscious ecstasy.

"Watch your mind very carefully. Be vigilant. Be on the alert. Do not allow the waves of irritability, jealousy hatred and lust to disturb you. These dark waves are enemies of peaceful living, meditation and wisdom. To some it is very difficult to keep the mind unruffled and pure, the causes being deep-rooted worldly samskaras, unfavourable surroundings, and the predominance of extrovert tendencies. To some, ofcourse, evil thoughts are not a problem at all. They appear occasionally as a passing phase without doing much havoc. The very fact that evil thoughts give you mental suffering is a sign of spiritual progress; for many do not have that much of sensitiveness.

1.1.3 Classification Of Yoga

There are four Yogas - Bhakti Yoga, Dhyana Yoga, Karma Yoga and Jnana Yoga.

- **Bhakti Yoga:** Devotion mixed with discrimination is an ideal path. Without discrimination devotion ends in mere sentimentalism or emotionalism. Therefore, the place of Buddhi in Bhakti Yoga is very significant. A concentrated mind alone is a fit instrument for prolonged and deep meditation on the Divine. Intellect alone can do this since it is superior to the mind and the senses.
- **Dhyana Yoga:** The mind is superior to the senses and the intellect is superior to the mind. Through the constant practice of meditation, we gain control over our senses and mind, which helps us to develop the power of concentration.
- **Karma Yoga:** No one can renounce work but if we learn the skill of performing work, the same work will release us from the bondage of Karma. Even a little work, done with the spirit of self-sacrifice and dedication, gives a sense of fulfillment. To work and yet to be free from the effects of work requires subtle understanding of the secret of work and such understanding comes from buddhi.
- **Jnana Yoga:** Discrimination between the real and unreal is called Viveka. Buddhi alone has the capacity to determine the real nature of an object. In the path of knowledge, the aspirant has to realize the truth by constant reasoning and through buddhi alone this can be done.

According to Sri Aurobindo, Yoga is to want to transform oneself integrally, it is to have a single aim in life, such that nothing else exists any longer, that alone exists. And so one feels it clearly in oneself whether one wants it or not; but if one doesn't one can still have a life of goodwill, a life of service of understanding; one can labour for the work to be accomplished more easily - all that - one can do many things. But between this and doing Yoga there is a great difference. And to do Yoga, you must want it consciously.

1.2.0 Statement Of Problem

'Impact of Yoga Training on Physical and Physiological parameters of Female Teacher Trainees- A Study'.

1.3.0 Delimitation

No study is complete in itself and it depends on resources of the investigator and they are termed as delimitation of the study. Following are the delimitation of the present study-

1. The study was delimited to impact of 8 weeks of Yoga training.
2. The study was further delimited to the selected Yogasna, Pranayama and Sukshma Vyayama.
3. The study was delimited to female teacher trainees of B.Sc., B.Ed. Ist year RIE. Bhopal.

1.4.0 Definition and Explanation of the Terms

Yoga

- The oxford dictionary defines, Yoga as a hindu spiritual discipline a part of which, including simple meditation, breathing exercises, and specific body position, is widely practiced for health and relaxation.
- Yoga is the total integration of the physical, mental, intellectual and spiritual aspects of the human personality.
- Yoga is the discipline of the mind, senses and physical body.

Yoga Training

It is the systematic regular practice of the various dimensions/aspects of yoga undertaken by an individual or a group of individuals for a specific duration of time.

Operational Definition of Yoga Training

It is the systematic regular practice of the selected sukshma kriyas, yogasnas, pranayamas undertaken by a group of individuals for 8 weeks.

- **Sukshma Vyayama:** These are the activities that initiate the body and the mind for vigorous "Asanas" & "Peanayana". This involves movement of major parts of the body such as eye, neck, wrist, waist, knee, ankle, and hip joint.
- **Yogasna:** Yogasna means 'स्थिरम् सुखम् आसनम्' i.e. that posture which is steady, comfortable and which develops physical, mental, emotional and spiritual aspects of the personality.
- **Pranayama:** Pranayama is the method of rhythmic regulation of breath. It produces stability in the body and equanimity in the mind of an individual. It is the source of volition, enthusiasm, spontaneity and happiness in an individual.

Physical Parameters

It is the bodily contact or activity which is affected by the practice of yoga such as cardiovascular endurance, explosive power, flexibility etc.

➤ **Cardiovascular Endurance/Circulatory Endurance**

Moderate contractions of large muscle groups for relatively long periods of time, which require an adjustment of the circulatory - respiratory systems to the activity. Examples - Distance running or swimming.

- **Explosive Power:** Ability to release maximum muscular force in the shortest period of time. Example - standing broad jump, vertical jump.

- **Flexibility:** Extensibility of a muscle is its measure of flexibility. The Kraus Weber floor-touch and reach test with knees straight is a good example for the extensibility of the hamstrings and the back muscles.

Physiological Parameters

It is the normal function of an individual and his/her internal body parts which are affected by the practice of yoga such as Heart rate, Breath holding time.

- **Heart Rate:** The rate at which expansion & elongation of the arterial walls passively produced by the pressure changes during systole and diastole of the ventricles.
- **Breath holding time:** It is the time duration of through which one can hold his breath with out inhaling or exhaling.

Teacher-Trainee

An individual undergoing training to teach in a school.

1.5.0 Objectives

1. To assess the physical parameters (cardiovascular endurance, flexibility, explosive power) of female teacher trainees, before and after the 8 weeks of Yoga training.
2. To assess the physiological parameters (Breath Holding Time and Heart Rate) of female teacher trainees, before and after the 8 weeks of Yoga training.
3. To compare the physical parameters of the female teacher trainees undertaking Yoga training with those of not undertaking yoga training.
4. To compare the physiological parameters of female teacher trainees undertaking Yoga training with those of not undertaking Yoga training.

1.6.0 Hypotheses

- Ho1 There will be no significant impact of Yoga training on cardiovascular endurance of female teacher trainee.
- Ho2 There will be no significant effect of Yoga training on explosive power of female teacher trainees.
- Ho3 There will be no significant influence of Yoga training on flexibility of female teacher trainees.
- Ho4 There will be no significant effect of Yoga training on Breath holding time of female teacher trainees.
- Ho5 There will be no significant influence of Yoga training on Heart rate of female teacher trainees.

1.7.0 Need and Significance

In today's scenario, when all activities are being carried out by merely sitting on a cushioned chair and at a click of the mouse button, the movement of body muscles has reduced to minimum. This has resulted into a generation, which is increasingly becoming lethargic, inactive and easily prone to tiredness and restlessness. With the advent of computers, television and other such new technologies, the physical involvement of an individual has almost come to a standstill.

It is, thus necessary to involve activities in an individual's life styles for his/her all-round development so that s/he may become active, energetic and enthusiastic. And what better than Yoga can serve this purpose!

Moreover, this study too shows that yoga has a positive effect on physical parameters, viz., cardio vascular endurance, flexibility and physiological parameters, viz., heart rate, breath holding time.

Thus, this study can benefit each and every individual in some or the other course of life.