CHAPTER I
INTRODUCTION

Among the many wonders in the whole universe, the greatest is the human body and mind. The Human mind in itself is a mystery. So many secrets pertaining to the human mind still remain unraveled. The Human mind is capable of many things. It can imagine, intuition, reason logically, empathize, sense of colour, beauty this world has to offer.

Human body is on the same lines as the human mind. Capable of so many thinks, one among them which is movements. Humans can walk, run, dive, jump, climb and perform gravity defying stunts. The human brain is behind such complex functions. Human mind and body go hand in hand in order to enable movements of human body parts.

In ancient era. Scholars connected the degrading works of men to reduced physical activity. Hence, to quit their wicked ways and turn over a new leaf, they devised the scientific way of gaining back the spirituality and intuitive wisdom. This scientific method consisted of yoga. There are countless numbers of yogic exercises. Movement of muscles, optimizing all the systems of human body, is achieved by practice of yoga.

Importance of Yogic Exercises

Mankind’s greatest treasure is good health and its virtues. Good health is what holds the path to success. To promote and restore good health man has devised many state of the art techniques related to physicality that lay way to muscular formations. These developments take the basal help and guidance from exercises that are mechanical in nature. Such exercises lead to quick muscular movements that in turn engage the heart and lungs to function at their highest potential. In doing so man is drained of his energy and exhaustion occurs leading to good sleep.

Human body is a miracle of nature, it is a complex system that makes the human body that is bones, muscles, tendons, entire system go hand in hand for optimum functioning. All these internal movements are balanced and optimized by the help of yogic exercises, which are tender, uniform and help in the conservation of energy.
The muscular system of the human body is one such system that needs constant motion and movement to function properly not giving it proper exercises leads to stagnation and decreases of flexibility giving the person a flabby body. Yogic exercises increases the flexibility and tones down the human body keeping the person agile and fit.

The same can be said in the matter of heart, lungs, and brain that are considered to be the most vital organs of the human body. By regular practice of yogic exercises these organs work to their peak.

Yogic exercises are not only preventive but also palliative in their nature. They keep up the defense system of the body keeping away infirmities. Some of the most petty yet common maladies such as common cold, fever, gastro intestinal upsets, breathing problems are kept at bay through yoga.

Another important system is the endocrine system that comprises of the base of the human body. Yogic exercises benefit the endocrine system by helping them work to the maximum and correct any malfunctioning.

In a nutshell it can be said that yogic exercises have been proved to be a boon to mankind by keeping man healthy. Increasing life span and strengthening him to fight off diseases it needed.

**Yoga for Women**

Women are said to be the weaker sex. This is truly said in terms of physical strength. In olden days women tended to stay indoors, whereas men used to toil outdoors. Looking after the house, children, used to be their responsibility which are tasks no less as compared to working outside. Thus women in these ancient periods used to stay fit and fine.

The same cannot be said to the women of this modern era. A majority of them opt for working outside in order to be independent and earn themselves. Today’s lifestyle has proved to be sedentary, not involving any physical work. Working condition are mostly desk jobs that require women to be seated in one place for long hours, thus decreasing movements and increases health problems.
Yoga helps women to keep up their health and ward off health problems. In addition to various health issues women have to deal with pain related to menstruation and childbirth. Yoga gives them the tolerance to bear and increases their pain threshold. It also helps women to gain back their previous body structure after childbirth. Modern women are very conscious about their figures and yoga helps them to stay in shape increasing their confidence and gaining personality.

Cancer is the world’s most prevalent disease that has claimed the lives of numerous women. Women who practice yoga are at the least risk to contract cancer compared to women who don’t. Yoga flushes out toxins from our body. Yoga also helps women in post partum period to overcome depression and post partum blues.

Today’s women face a lot of stress and pressure at home as well as at workplace. Yoga helps women overcome such work related stress and enables women to relax through meditation.

**Health Benefits of Yoga for Women**

International yoga expert Colleen saidman saya yoga “offers women solace, reflection, joy, acceptance and ease in their bodies.”

Yoga stretches the body, tones the muscles and relaxes and calms the mind. Through yoga one can develop a stronger and more flexible body that also looks toned and healthy.

Among many generally noted benefits for Women. Below are some specific mentioned benefits.

- Decreased susceptibility to tension and stress.
- Optimum levels of energy.
- Higher Flexibility.
- Increased pain threshold.
- Weight loss.
- Normal blood pressure.
- Sound sleep.
- Decreased incidence of depression.
- Increased concentration and Cognitive development.
- Increased levels of strength and endurance.
Importance of Health

To put in the words of World Health Organization “health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity.

According to J.F. Williams “it is the quality of life that enables an individual to live most and serve best”.

Importance of health is rarely recognized by people and brushed aside a matter of trivial. Good health is essential in order to help people to carry out their duties be it at home, school or at work place.

As the definition of World Health Organization suggests a person is not healthy only by being rid of disease but has to healthy in a holistic aspects of physical, mental and social. The need for good health is universal. It can be accessed by people all over the world regardless of region, race, religion and gender.

Good health doesn’t mean only physical health but also mental health as the root cause of infirmities is said to be mind related. Yoga help in keeping our physical as well as mental in a balance and improves our lifestyle in a holistic approach.

Pranayama

Being derived from two Sanskrit words “prana” meaning life force and “Ayama” meaning control Pranayama means controlling the flow of life force. Pranayama is not just control of breath but a lot more than that.

The goal of pranayama is said to be achieved when the quantum of life force (prana) is increased to the highest level. Prana is life force or energy is a universal concept. Apart of it is also present in the human body.
Benefits of Pranayama

Pranayama refers to the breathing technique in Yoga, which can work wonders in improving the overall health and the function of all the organs in the body. Improvement in the rate of breathing.

Pranayama Benefits are Physical, Emotional and spiritual. Some of the most Pranayama benefits are:

- Physiological reduction in heart rate.
- Avoidance in weight gain and accumulation of fat.
- Healthy respiratory Status.
- Optimum functioning of body system.
- Flushing out of toxins.
- Strong immune system.
- Healthy mental health.
- Controlled blood pressure.
- Concentration and mental focus is improved.
- Improved body Posture.
- Increased Flexibility.
- Relaxing effect on the mind and nerves.

Health Related Fitness

It is concerned with the development and maintenance of the fitness components that can enhance health through prevention and remediation of disease and illness. Health related fitness enhances one’s ability to function efficiently and maintain a healthy lifestyle. Thus health related fitness is important for all individuals throughout life.

Health related physical fitness is based on the assumption that an adequate level of body development is required for health. There are five components of health related fitness namely muscular strength, muscular endurance, cardio respiratory endurance, flexibility and body consumption.
According to current thinking in the physical education profession, physical fitness is either health related or performance related. In keeping with wellness trend today and an emphasis on all aspects of healthful living in addition to stressing performance or motor skill related to fitness. This aspect of physical fitness concerns the development of qualities necessary to function efficiently and maintain a healthy lifestyle. Each of the components of health related fitness cardiovascular endurance, muscular strength and endurance, flexibility and body composition Bucher and prentice (1985).

**Cardiovascular Endurance**

Cardio-vascular endurance the endurance of circulatory system is the ability to carry on its functions efficiency under conditions of heavy work. Cardio-respiratory endurance is the ability of the heart, lungs and blood vessels to deliver essential nutrients, especially oxygen, to the working muscles and to remove waste materials from the body. The benefits of an improved cardiovascular Endurance are decreased resting heart rate, decreased risk of cardiovascular disease, improved endurance, increased stroke volume and cardiac output.

Thaxton (1988) it is identified as the most important component in health-related fitness, cardio-vascular endurance is the ability of the heart, lungs and vascular system to function efficiently for an extended period of time. Directly related to this function is physical working capacity. A heart and circulatory system that is functioning at a higher level, thus delivering more blood, is also making more $O_2$ available for working muscles. This process increases the child’s ability to work at a greater intensity and over longer period of time without debilitating fatigue.

**Muscular Strength**

Muscular strength is important for individuals to perform daily activities and tasks such as taking out the trash, moving furniture or appliances or changing a tire and lifting, pulling or pushing objects. Many tasks involve use of the upper body and lines. In an emergency a strong individual has a better change of avoiding serious injury compared with a weak person. In many cases upper body strength can make the difference between a serious injury and escaping harm.
Muscular strength is defined as the ability of the muscles to produce force at high intensities over short intervals. It is a conditional ability, and it depends largely on the energy liberation processes in the muscles. Strength the most important motor ability in sports is a direct product of muscles contraction. All movements in sports are caused by muscles contractions and therefore, strength is a part and parcel of all motor abilities, technical skills and tactical actions. Strength training is good for general health, good posture and prevention of injuries.

**Muscular Endurance**

Muscular endurance is defined as the ability of the muscles to sustain repeated productions of force at low to moderate intensities over an extend amount of time. It indicates that your muscles are strong enough to move for long periods of time and can complete numerous repetitions. In physical education program each day during the warming up phase of each lesson students must develop muscles endurance by participating in sets of abdominal exercises in increasing numbers as the time passes.

Abdominal muscles can promote health related problems by contributing to a misalignment of the spine. When weak abdominal muscles add attain to the lower back muscles, lower back problems can result. Many research studies conducted to investigate the ways to provide relief to people who suffer from back pain have demonstrate that improving the endurance of the abdominal muscles can decrease the incidence and severity of the pain.

**Flexibility**

Stretch ability and elasticity are the special qualities of the muscles and ligaments by which these can be stretched and can regain their normal length without any adverse effect on the concerned tissues.

Flexibility is the capacity of a muscle to extend without any damage. Flexibility is measured by determining the range of movement at a joint. It has important inter-relationship with other performance factors. It therefore determines the other factors to a loss to great extent.

Flexibility allows movements with minimum of muscles tension and internal resistance. It therefore has an energy saving effect.
Flexibility is defined as the ability to remove muscles and joints through their full range of motion. Most people will, at one time or another, suffer back problems. Approximately 80% of these low back problems are due to weak and or tense muscles. Many daily activities place a great deal of strain on these muscles. Physical activity can also contribute to the risk factors that promote back problems. This means that these problems can be deducted or limited through improved physical fitness. Physical inactivity contributes to a loss of flexibility for the lower back and the hips flexors, sitting for long periods time promotes a sedentary existence which will result in a loss of flexibility. Individuals with a sedentary life style who perform occasional physical labor are at high risk for developing back problems. Physicians prescribe specific trunk and thigh flexibility exercises, stretching for their patients with lower back problems, supporting the value of stretching exercises to prevent low back problems.

**Body Composition**

The human body can be divided into lean weight and fat weight parts. For good health, the body should maintain the proper ratio one to the other. Obesity is an excessive accumulation of fat. Low level of activity resulting in fewer calories used than consumed contributes to the high incidence of obesity. Young people are more obese now than ever before. Obesity is associated with many risk factors of coronary heart disease, stroke and diabetes. Reversal of these risk factors can be achieved by reducing an individual’s total body fat. Exercise along with proper diet by observing good nutritional principles relating to lowering personal consumption of saturated fats, sweets and excessive calories are important life style changes that individuals must make.

The Researcher reviewed the literature and understood the importance and benefits of yogic exercises and it promotes Health Related fitness of the human being hence, the researcher wanted to conduct investigation to find out the 16 weeks of yogic exercises training promote the health related fitness of women.

**Statement of the Problems**

The purpose of the study was to find out the “Effect of Yogic Exercises on
Health Related Fitness of Women”.

Objectives of the Study

- To find out the Effect of Yogic Exercises training on Health Related Fitness of the Subjects.
- To study the Effect of Yogic Exercises training on Cardiovascular Endurance of the Subjects.
- To find out the Effect of Yogic Exercises training on Flexibility of the Subjects.
- To study the Effect of Yogic Exercises training on Muscular Endurance of the Subjects.
- To find out the Effect of Yogic Exercises training on Muscular Strength of the Subjects.
- To study the Effect of Yogic Exercises training on Body Composition of the Subjects.

Delimitations of the Study

- For the purpose of the study, 60 women subjects in the age Group ranging from 18 to 22 years were randomly selected.

- The subjects were randomly assigned into two Groups of thirty each (n=60). Group I known as Experimental Group underwent yogic exercises training and Group II acted as Control Group who did not undergo any special training Programme.

- The duration of the experimental period was Restricted to 16 weeks. The number of sessions per week for the Experimental group was confined to six.

- The following Health Related fitness components, like Cardiovascular Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition were selected for the study.

- The following Asanas were selected for the study Padmasana, Vajrasana, Paschimottanasana, Tadasana, Vrikshasana, Garudasana, Trikonasana,
Shavasana, Naukasana, Halasana, Sarvangasana, Chakrasana, Makarasana, Bhujanagasana, Dhanurasana and Shalabhasana.

- The following Pranayama were selected for the study Anuloma Viloma pranayama, Sheetali Pranayama and Sheetakari Pranayama.

**Limitations of the Study**

- The daily routine work of the subjects influenced Results, hence this was considered as limitation.

- The climatic conditions at the time of conducting the test influenced the performance of the Women’s was considered as limitation.

- The general mood of the subjects Environmental factors and performance in the test by the subject was recognized as limitation of the study due to varied social, cultural and environmental factors were not taken into consideration.

- No motivational techniques were used for the collection of data.

**Hypothesis**

- It was hypothesized that the Yogic Exercises Training improves the Following Health Related Fitness of the women.

- It was hypothesized that 16 weeks Yogic Exercises Training develops Cardiovascular Endurance.

- It was hypothesized that 16 weeks Yogic Exercises Training develops muscular strength.

- It was hypothesized that 16 weeks Yogic Exercises Training develops Muscular Endurance.

- It was hypothesized that 16 weeks Yogic Exercises Training develops Flexibility.

- It was hypothesized that 16 weeks Yogic Exercises Training develops body composition.
Significance of the Study

• The Result of this study helps Physical Education teachers, coaches and trainer to make use of yogic exercises training to improve the Health Related fitness of the subjects.

• The Result of this study helps to assess the development of Cardiovascular Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition of the subjects.

• This study threw light on the level of Health Related fitness of the subjects.

• This study provides useful and productive suggestions for the enhancement of Health Related fitness among of the subjects.

Definition of the Terms

Yoga

Yoga practice helps the individuals to maintain their mind, body, spirit and to promote health well being.

Asanas

The asanas are recognized the main physical components of yoga training. These are slow stretching activities performed to improve the body fitness.

Padmasana

Padamasana means sitting in the lotus pose to maintain padamasana posture arrangement of the hands and feet resemble a lotus position.

Vajrasana

Vajrasana this asana one should sit with flexed legs with hands or over knees and body must be straight and the body is resting over the ankles.
**Vakrasana**
Twisted postured is called Vakrasana in this asana one should twist this spine to the left and right side in the erect position.

**Paschimotaanasana**
Paschimotaanasana means stretching the posterior regions of the body.

**Garudasana**
Garudasana means making the body posture in eagle position.

**Trikonasana**
Trikonasana means making triangle pose in an asana trikona means revolved triangle pose.

**Shavasana**
Shavasana means making the body in dead position. It is complete relaxation of all parts of the body in a lying position.

**Naukasana**
Naukasana means making the body like a boat pose the final position of this asanas resembles like a boat.

**Halasana**
Halasana means making the body position like a plough pose in the final position of the body resembles the plough.

**Tadasana**
Tadasana is often a starting position in a yogic routine which consists of standing with arms straight down one's sides for balance and alignment.
**Vrikshasana**

"Vriksha" means "tree" in Sanskrit. In the final position of this asana, they have to stand still like a tree.

**Sarvaangasana**

“Sarvaang” means “All the parts of the body”. It is required to “lift all the parts of his body upwards on the neck” in this asana and hence the name Sarvaangasana.

**Chakrasana**

The body is bent towards back in a circular pose in this asana, hence this asana is called as chakrasana.

**Makarasana**

Makarasana or the Crocodile pose is a yoga asana used for relaxation. In sanskrit, ‘Makar’ means crocodile and ‘Asana’ means a pose.

**Bhujangasana**

Bhujagasana means makes the body position like cobra pose in their asana raised trunk, neck, and head joint and stretched legs making cobra pose.

**Dhanurasana**

Dhanurasana means making the body in the shape of a bow pose the arms are stretched and lower legs resemble the taut bowstring the trunk and thighs resemble the wooden part of the bow.

**Shalabhasana**

From pro-lying position start raising the lower part of the body, hands are by the side of the body.

**Pranayama**

Pranayama is a system and rhythmic control of breathing, performed to improve the functions of the human body.
**Anuloma and Viloma Pranayama**

Anulom vilome Pranayama is a alternate nostril breathing inhales air through right nostrils and exhales through left and inhales air through left nostrils and exhales through right.

**Sheetkari Pranayama**

“The practice of sheetkari pranayama has cooling effect on the body”.

**Sheetali Pranayama**

Sheetali According to Pradeepika and Gheranda Samhita : Sheetali Pranayama cools the body.

**Health**

Health means complete state of physical, mental and social well-being.

**Cardiovascular Endurance**

The function of the heart, lungs and vascular system to function efficiently for an extended period of time is known as cardiovascular endurance.

**Muscular Strength**

The maximal force that can be applied against a resistance is known as muscular strength.

**Muscular Endurance**

The ability of the muscles to sustain repeated and productions of force and functions of the muscles over an extended amount of time is called as muscular endurance.

**Flexibility**

The maximum range of motion at the joint is known as flexibility.

**Body mass Index**

The height and weight of an individual ratio squared it is used as a measure of