Chapter I

INTRODUCTION

Women are moving like never before. They are getting stronger, playing harder and paying more attention to what their body have to say. According to the latest womens’ sports foundation survey, 62% of American Women over age 18 exercise regularly. Younger is also getting involved in greater numbers. For example, participation in girl’s high school track and field has increased 6 folds since 1975. On the recreation front, women make up more than half the participants in eight most popular sports in the United States.

The Scenario has vastly changed definitely, women along with the rest of their family did have lots of prejudice regarding their body and feminity and were quite unsure of the consequences of the physical activity and exercise on their body. Marriage specially made them think very negatively about active participation in physical activities and exercise and they continued to believe that it would harm them and therefore they preferred to live a safe and sedentary life. The womens’ sport movements suffered a setback with the rest of the world. Suddenly it was seen as unpatriotic to take a man’s place in a job.
Fewer women worked, went to college or could afford to live away from home.

In 1936, an article appearing in the prestigious Scientific American Journal/Newspaper warned that "Feminine Muscular Development Interferes with Motherhood". After such report and the medical misinformation along with the psychological scare the tactics seemed to be working. Fewer women were joining sports leagues and the new gymnasiums built were rarely filled with the joyous noise of women recreation.

Exercise became patriotic again with the second world war starting, a man had to leave to serve their country and one of the most unique result of man’s absence in the country was the formation of an all womens’ professional baseball league. The hems of their uniforms could be no more than six inches above the knee which when you think about it were quite a measure of progress from the days when field hockey dress could be only six inches from the ground and when the men came back from the war they wanted life to be once again as it was. Once again women who expected to be available for their family as a new wife and mother. Working with body pursuing physical activities somehow did not fit into the updated profile of what a family
women should be and predictably the emphasis was on protecting her most valued assets: her reproductive system and her feminity.

It was until 1960’s and 70’s that women once again began to fight for their right to participate equally in sports opportunity both as amateurs and professionals. When women first began banging on the door of this ‘sports world’ they of course were able to get sanctioned support for team, although their budget were characteristically lesser compared to the mens’ team.

Life at the Dawn of the 21st Century for womens’ team was nothing short of top-of-the-life. The attitude of media and the crowd has drastically changed towards women games and sports. Women athletes in any country now have access to national television audiences and national television funding. In addition to media coverage they now have facilities like custom built team buses, chartered air travel, first rate hotel lodging etc.

In 1982, a study was done on a limited samples of women runners who were experiencing amenorrhea (loss of period). The researchers found that all the women had evidence of bone loss in their spine, a factor that would presumably put them at risk for osteoporosis,
which is a condition of weakened bone that can lead to bone breakage. Alarmist articles in the popular press warned women that running could cause them to lose their periods and develop brittle bones. A similar situation occurred with the study of pregnant women, the articles had frightening headlines like "Vigorous exercise can slow fetal heart rate" the message came loud and clear: Exercise endanger the health of your unborn child. Another case of misinterpreted findings followed the "release and safety guidelines for women who exercise" by the American College of Obstetricians and Gynecologists in the spring of 1985. It recommended 60 minutes of aerobic activity 3 to 5 days/week and 60 to 90% of aerobic activity to a given level of intensity, duration and frequency for a well conditioned woman but hazardous for one who is deconditioned.

There have been endless comparisons between men and women in sport, whilst it is generally agreed that men have a greater sports capacity than women in those activities which favour strength, this assumption cannot be made when measurements of stamina and skill are concerned.

The governing bodies of many sports have refused female participation for reasons that must have been very important at the
time. The rules of athletics, for instance, excluded women from all stamina events until very recently. Now however, it is evident that women can challenge men in many sports without special concessions. In the case of improvement of running times, women have far outstripped the male regime. In Britain it has taken women only 18 years to improve by nearly one hour in the Marathon (i.e. 3 hours 27 minutes 45 seconds in 1964, to 2 hours 29 minutes 43 seconds in 1982), whilst men have taken the best part of 75 years to make the same improvement.

The natural core functions of the female of any species are different from the male, to the point of being almost opposite. Even in the lowest forms of life the female is especially adapted to create a continuation of her own kind. Her size is invariably smaller than the male, although there are some notable exceptions to this rule.

When comparing the woman’s sports ability with men there are obvious disadvantages for the body. Perhaps the need for any comparison is pointless, and it is more appropriate to look at the immensely rapid advances made on all fronts in womens’ sports.
The skeletal frame of a woman is specially formed to allow her to reproduce. The need for bulky muscles and large bones is not the first priority, and the balance of strength between shoulders and hips is nowhere near equal. In man, however the vastly greater muscular power of the shoulder is easy to see.

In the area of fitness training, therefore, the women must adapt a few of the male’s exercise to suit her basically different frame to keep herself fit and healthy throughout her life. Women in fitness training need only slightly modified schedules and exercise to suit their physiques, since the response of the body is same in both men and women and only the degree of muscular development changes due to hormonal controls, which is different in the both the sexes.

A very important reason and factor also responsible for many women, who were interested and participated actively in sports, to not to continue being active and become sedentary was their pregnancy. Child bearing and menstruation are seldom taken into account in fitness training. In the first instance a fit and healthy person usually rides the storms and problems of pregnancy with far greater ease than an unfit women again making it so clear that how important it is for a women to lead a fit and active life for her own good, although after the
birth, the advice generally given is to take rest and wait for some weeks before returning to activity and fitness regime, but the word rest is again open to interpretation.

Most women are concerned about the shape of their tummy muscles after childbirth. The abdomen has suffered some very dramatic changes in a comparatively short time, and the muscles are stretched and reluctant to return to their original state. The hospital physiotherapists do their best but it is up to one own self to carry on exercise to get back into shape and lead an active life to avoid much pain and ailments in the future.

Post-natal exercise and routines will probably be the last thing on a new mother’s mind, since a new baby is very time-consuming, tiring and disruptive. A few minutes per day, however, is all that is needed to start to repair the tummy muscles. They have been stretched after delivery and without proper exercise regime shall take a lot of time to return to normal and thereby make the whole body look irreparably damaged.
Initially there will be little or only slight improvement, but perseverance will reap rewards later. A gentle and progressive return to training over a period of months rather than weeks is the best methods.

Some women return to everyday life and training extremely quickly after giving birth, for others it is a more lengthy process. There is therefore, no reason whatsoever to consider that by any means motherhood or marriage is the end of one’s active life or participation in sport, in-fact many women go on to improve after becoming a mother.

Sport and menstruation is another important aspect as far as women fitness and health is concerned. Initially in the early years it would depend only upon the information derived from the girl’s mother and friends but later on one finds that it is basically the attitude that deals with problems of menstruation. A woman who would like to continue with her fitness regime shall carry on the program no matter what, and the inconveniences and pains caused due to the menstruation problem shall become a secondary factor. Every woman has her own pain threshold, at which point she decides whether she will continue with her training or not. It is true that active women appear to suffer the least from menstrual problems than sedentary women. It affects
one’s schedule of other social work as well if the pain is excessive, so it is always advisable to lead a fit and active life.

Age is another controlling factor. The onset and setting down into a monthly pattern can be rather irregular when a young woman is just progressing in sport and at the time of menopause, when similar haphazard conditions prevail. Many women give up sport because periods are so inconvenient.

It is already an established fact that regular physical activity can improve fitness and improves functioning among older adults and therefore women should always emphasize upon leading a fit life. Approximately 30% of adults age 70 and over have difficulty with one or more activities of daily living. Women have more limitations than men and low income groups have more limitations than high income groups.

The inability to function effectively as we grow older is associated with lack of fitness and inactive lifestyles. This loss of function is sometimes referred to as “acquired aging” and due to these reasons it becomes very important for women to stay active both before and after marriage to avoid limitations in their movements in
future. The surgeon General's report indicates that losses in muscles
fitness are associated with loss of balance, greater risk of falling, and
less ability to function independently.

Physical activity also enhances the metabolic fitness that can
reduce risk of a variety of health problems. When metabolic systems of
the body do not work effectively, it can lead to risk of chronic diseases
such as diabetes and heart diseases.

Metabolic fitness is supported by healthy blood fat (lipid)
profiles, healthy blood pressure, healthy blood sugar and insulin levels
and other non performance measures.

Physical Fitness and physical activity are also important to
health promotion and feeling well. It makes one feel good, look good
and enjoy life to the optimum level. It helps in enjoying the leisure life
and improves the ability to meet stressors, helps to get relieved from
depression and better sleeping habits are also acquired by an individual
and most importantly women of the 21st century wants to be socially
accepted and look good in a crowd of people, with physical fitness she
has a controlled weight, good posture and a better figure by which she
always feels positive and motivated.
Good physical fitness can also help today's women work more effectively and efficiently as with higher fitness level she can resist fatigue, muscle soreness, back problems and other symptoms associated with poor health related fitness and therefore making her more productive and energetic at all walks of life. Surveys of employees who are involved with employer fitness programs indicate that 75% have an improved sense of well being. Women with good skill-related fitness may be more effective and efficient in performing specific motor skills required for certain jobs.

Physical Fitness is also essential for women for effective living. Although the need for each component of physical fitness is specific to each individual, every person requires enough fitness to perform normal daily activities without undue fatigue and tiredness. Whether it be walking, performing household chores by housewives, or merely feeling good and enjoying the simple things in life without pain or fear of injury, good fitness is important for women of all age.

It also helps to modern woman function safely and assists her in meeting unexpected emergencies as emergencies are never expected, they never knock our door and come, but when they do arrive, they often demand performance that require good fitness. For example,
flood victims may need to fill sandbags for hours without rest, and accident victims may be required to walk or run long distances for help. Also good fitness is required for such simple tasks as safely changing a spare tire or loading a moving van without injury. Therefore we can see how important physical fitness and active lifestyle is for a women in meeting emergencies or even to be able to do daily work in life.

Physically fit women are also more developed intellectually and creativity is more enhanced among them. When they are active the whole day for them is spent quite smoothly as far as intellectual pursuits are concerned. Just as unhealthy lifestyles are the principal causes of modern day illness such as heart disease, cancer and diabetes, healthy lifestyles can result in an improved feeling of wellness that is critical to optimal health. In recognizing the importance of "Years of Healthy Life." Being physically active and eating well are two examples of healthy lifestyles that can improve well being and add years of quality living.

Regular physical activity (exercise) is an important parameter of healthy lifestyle. It is a priority because it is a behavior that affects the lives of all people and large number of women can make improvement
upon it and most importantly a modest change in this behavior can make dramatic improvements in a woman individually as well as publically. For example statistics suggest that modest changes in physical activity patterns and nutrition can prevent more than 200,000 premature deaths annually.

The HELP philosophy can provide a basis for making healthy lifestyle change possible. The first letter stands for ‘Health.’ It indicates that women who believe in the benefits of healthy lifestyles are more likely to engage in healthy behaviours and thereby put emphasis on the regular exercise and fitness. The letter ‘E’ stands for ‘Everyone’ which clearly says that anyone and everyone can get involved in physical activity to lead a healthy life. It is for all people and no one is excluded from this healthy lifestyle. It promotes the concept of ‘Health for All.’

The letter ‘L’ in HELP stands for ‘Lifetime.’ Younger women do not realize the need and importance of physical fitness and active life and therefore keep on neglecting it but as they grow older, get married, bear a child things seem to change with their body. Therefore women should include the regime of physical fitness for a lifetime in their lives. The letter ‘P’ stands for ‘Personal.’ It is up to oneself that
how one wants to maintain a healthy lifestyle. Whether one wants to get rid of diseases, disparities and depressions or one continues with one’s sedentary lifestyles falling prey to ailments and illness at a very early age itself.

Women in sport are now a serious force in world competition and the domination by men of world –class sport is threatened. At a professional level, the quality and quantity of high money earning women is quite remarkable and the publicity attracted has led to a media glamorization of health fitness and vitality.

In order to have excellence at the top of the world sporting scene there must be a high base of regular players at a lesser level.

The Central Council of Physical Education (C.C.P.E) has a nationwide policy of ‘Sport for All’ and the public is encouraged to ‘have a go’. Invariably sport centers offer a family package which invites us to enjoy our leisure time in a sporting atmosphere. Mass media implores us to ‘work out’ on ‘fight the fat’ but opinions vary greatly as to the best way to get fit. Many people after many various things but one true method to increase the general condition is to embark upon a scheme of regular and progressive method and since
every individual differs from the other no one method is applicable for all, a certain amount of experiment is necessary to discover what is right for you.

The present national interest in fitness and health is not aimed chiefly at sports fitness, it is more a medical warning shot at people who may be prone to heart problems and other health problems caused due to lack of regular exercise or by leading a sedentary life. Our bodies were designed to be used. We were not made to sit behind desks or computers all day. But we often do. Life has become so filled with conveniences that we tend to sit back and “let our fingers do the walking.” We slouch in a sofa and ‘Channel surf’ rather than getting up and changing the TV channel. We drive our car across campus or just a few blocks rather than walking the distance. We cannot really afford to become a non physical society, we need to come out of the sedentary lifestyle and lead an active life with regular exercise and proper eating habits.

Over recent years there has been a large increase in leisure time for many people and out of the home leisure activities one becoming a more serious part of our everyday lives. Women are involving themselves in sports for health, enjoyment and physical improvement
and indeed the enjoyment derived from this and the advantages healthwise are superseding that from just watching other play.

Women should take sports seriously, not necessarily at an international or to national level. ‘Keep fit’ classes should be an acceptable part of their timetable, although it is a debatable question as to ‘how many men would actually appreciate their wives to be on the sports field or the gymnasium for a workout session on a Sunday morning.

Although women are unlikely to compete against men in the majority of the games, this is no reason to disregard the importance of fitness for women. Even in a household where both partners are actively involved in sport, there is usually an unwritten agreement that the husband’s training is more important than the wife’s and this attitude can only be changed by women, who must assert their needs and ensure that they have a reasonable amount of time and opportunity and it is a requirement for them as well, to fulfill their fitness or sports programme.
Statement of the Problem

The purpose of the study was to compare the physiological, physical and structural variables of active and sedentary women before and after marriage.

Delimitations

1. Study was confined to the selected physical, physiological and structural variables of active and sedentary women before and after marriage.

2. The study was further delimited to women only.

Limitations

1. The subjects involved in the study were selected from different backgrounds, they had variations in their lifestyles, diet, daily routine habits, socio-cultural backgrounds which might have indirectly influenced the prediction factor.

2. The study was conducted in controlled condition but not in natural competitive situation, which might be considered as a limitation of the present study.
3. Though every care was taken while collected the data, any systematic error affecting the result of the study was considered as another limitation of the study.

4. No special motivational techniques were used but the subjects were encouraged to give their best performance while going for the cardiovascular endurance test, flexibility and strength test.

**Hypothesis**

On the basis of the knowledge reflected by the available literature, research findings and the scholar's own understanding of the problem the following hypothesis were formulated:

1. There would be changes in the physical, physiological, and structural variables in active women after marriage.

2. There would be changes in the physical, physiological and structural variables in sedentary women after marriage.

3. The changes in the sedentary women after marriage in physical, physiological, and structural variables would be more than that of active women resulting into poorer performance while giving the tests compared to the active women.
Definition and Explanations of the Terms

Active

An active person is defined as the one who is busy doing things, in this study it refers to those people who are busy doing physical activities and involve oneself or participate in physical activities energetically and spend a lot of energy exercising jogging, walking, cycling or even playing some kind of game/sport on a regular basis.

Sedentary

A sedentary person is the one who spends a lot of time sitting down and not moving much. In this study it refers to such people who do good amount of work and do not spend time sitting down but do not participate in physical activities like running, jogging, walking or exercising but may engage themselves in household works and other errands outside.

Physical Variables

The variables which involve the physical functioning of the body like strength, flexibility and cardiovascular endurance etc.
Physiological Variables

The factors that involve the functioning of the circulator, respiratory and related systems during an activity are defined as physiological factors.

Structural Variables

The variables that are related to body measurements like length of the limbs, girth and width of limbs are called structural variables.

Significance of the Study

Like any other physical activity, training or stress (both voluntary and involuntary) leads to certain physical, physiological and structural adaptive changes in several systems of the body normally connected with that stress or activity. Moreover, not much work has been conducted in the area of impact of marriage on various physical, physiological and structural parameters with special reference to sedentary and physically active women. Therefore the significance of the study are as follows:
1. This study will add new information and knowledge in the field of physical education in general and exercise physiology in particular.

2. The study will specifically weightage the impact of marriage on special selected physiological, structural and physical variables.

3. The result of the study will also highlight a comparative effect of the marriage on selective physical, physiological and structural variables of the women with sedentary and active backgrounds.

4. The result of the study shall be beneficial in case of altering/monitoring and changing some of the lifestyle an exercise profile for married women with special reference to sedentary and active women.