INTRODUCTION

Development of the present century in all walks of human life has surpassed the progress of thousands of years and sports are also a part of it. Technology covers every aspect of life and sports are no exception to it. Sports science has enabled modern youth to develop physical capacities beyond imagination. Sports science has become an effective tool raising the performance in this highly competitive world and records are being broken this greater rapidity and regularity.

Now a day Sports has become part and parcel of life. Millions of fans follow different sporting events all over the world with an enthusiasm bordering on devotion as well as fanatic following. Many people participate in games and sports for fun, happiness, pleasure as well as for health and fitness. Increased participation in sports has resulted in competition, which has become an important element of modern life.

Fitness is an essential part of any game. Technique deteriorates as fatigue increases, so players must work to improve their strength, speed and endurance. Many games are won and lost in the final seconds and it would be tragic to loose a game, because players were too unfit to perform the skills they have practiced for so long.

Skill in any game is pre-requisite to the performance of an individual. It becomes highly impossible for any player to achieve levels of any game without having a concrete base of skill. A highly skillful player utilizing all his personality during the game situation further
applies tactical skills to overcome adverse situations. In other words, skills may become a detrimental factor for sports performance.

Basketball is a game where full speed is seldom achieved by a player and in fact very in frequently warranted. The player must always be ready to stop and change direction quickly and this suggests that a compromise must be reached between the use of out-right speed and use of controlled speed so that he can drop quickly and change the direction on demand. Basketball player is most effective when he can start quickly and move with `controlled speed to a given spot on the floor. Therefore, Basketball is more often a game of nimble and quick bursts of speed from side to side fluent forward movement on player surface.

Basketball is probably the leading ball game in the world. Over the year this versatile game has been established as an important game due to its physical and educational values as well as to its tremendous dynamics.

All-round exercises serve as the main means for the general physical preparation. Therefore, it is first of all, necessary for the basketball player to master the basic techniques of general and exercises which are suitable for the development of physical abilities.

Shooting is an important skill required in most of the games event in Basketball. The shooting skill, like other of Basketball, requires more powerful concentration. In an international Basketball competition, almost all teams are of similar physical caliber, but team which complies of good shooters always wins.
The experiments on Yoga in relation to neuro-psychophysiological aspects also revealed that. Yoga contributes to take care of one’s attention, motivation, anxiety concentration, neuromuscular efficiency, balance, coordination etc. (Bera et al., 1990: Gore, 1987: Kulkarni & bhogal, 1991: Sahsi, 1988: Vinod et al., 1991) that require for better shooting performance in Basketball. Like Yoga, Sufism also considers similar contents, but the usefulness of this content in area of sports has not been verified till-date.

Although various relaxation techniques are also recently being applied among athletes in competitive sports to improve overall performance ability, Malick (2000) proved the utility of Yoga stretching and relaxation for improving rifle shooting performance among the personnel’s of Indian Defense. Review of research literature indicates that sports scientists have evolved various scientific methods of training and strategies to improve better performance in different sports including Basketball (Coughlin, 1984: Giorgis, 1986: Houston, 1989: Kavussanu, 1992: Smith, 1987). It was, therefore, thought desirable to undertake the present study.

What is Yoga?

As per Indian tradition Yoga, especially Hathayoga, comprises of different yogic exercises viz., asana (body postures), pranayama (controlled regulation of breath), bandha (physiological locks or hold of the semi-voluntary muscles), kriyas (cleansing process) and mudras (attitude which spontaneously arouses meditation ). Swami kuvalayananda, the father of scientific research in Yoga and founder of
Kaivalyadham (India) has constructed the curriculum of yogic exercises to maintain health and fitness

Yoga is a systematic discipline, originated in India the self-realization. However, now a day, scientific researches find its utility for all round development of personality along with innumerable spiritual as well as therapeutically applications, Yogic exercises are also becoming popular in the area of games and sports and also in the curriculum of Indian schools, college and universities.

When we speak of health, we normally think of only the body, but the health of one’s mento-emotional, social along with spiritual aspects is important too. What we need is “Total” health. To achieve the above goal one should practice some sort of physical exercises, or yoga or any sports; of course it may vary from person to person, depend upon one’s choice. Having spent few hours in the early morning doing yoga is the best prescription for a sound mind in a sound body. Thus the scope of this piece of research is large.

**What is Fitness and it’s Components?**

The wise men of all ages and races, white, brown, yellow, and black, civilized or barbarians, savages, back to the cave men, made use of the power of mind over body. As you advance with your training you will find that mind is the most important part of training.

Fitness: - Exercise scientists have identified nine elements that comprise the definition of fitness, the following list each of the nine elements and an example of how they are used:-
• Strength – The extent to which muscles can exert force by contracting against resistance (holding or restraining an object or person)
• Power – The ability to exert maximum muscular contraction instantly in an explosive burst of movements (Jumping, sprint/starting)
• Agility - The ability to perform a series of explosive power movements in rapid succession in opposing directions.
• Balance – the ability to control the body’s position, either stationery or while moving.
• Flexibility – The ability to achieve an extended range of motion without being impeded by excess tissue, i.e. fat or muscle (executing a leg split).
• Local muscle endurance – A single muscles ability to perform sustain work.
• Cardiovascular Endurance – The heart ability to deliver blood to working muscle and their ability to use it.
• Strength Endurance - A muscle’s ability to perform a maximum contracture time after time. (Continuous explosive rebounding through an entire Basketball game.
• Coordination – the ability to integrate the above listed components, so that effective movements are achieved.

Of all the nine elements of fitness cardiac respiratory qualities are the most important to develop as it enhances all the other components of the condition equations.
Fitness through Yoga

Various training programmes have developed strengthening the part of body. Most of these programmes consist of vigorous and resistance exercise which emphasized more on cultivation of strength and endurance. Every individual differ in their capacity and level of physical fitness.

Yogic practices getting popular are looks upon it systematic for improvement of physical fitness of an individual. Yet we lack in the experiment evidence about the utility of physical and exercises for promoting physical fitness.

It can be said that exercises are believed to contribute physical fitness; therefore it is necessary to consider the concept of yoga of exercise, in relation to the physical fitness. Yoga is recognized as one of the most important and valuable heritage of India. Today the whole world is looking to yoga for the answer to various problems that modern man is facing which was designed and practiced by our ancient sages for the all round development of personality. Now a day’s yoga is getting famous and support for use figure and fitness. Few minutes of daily yoga provide well result in all round development.

In order to bring yoga to life and to really profit by it, one must take it to heart in every sense of the word, and live it as an essential part of one’s daily life.

Creating awareness about fitness in the community is very important for people need to realize the value of fitness. Real fitness comprises of various factors like endurance, body composition, flexibility, muscle fitness and the ability to achieve mental relaxation. Real fitness deals with the ability of a fit body to create a calm and
happy mind. If your body is a temple and soul the deity, real fitness beauties the temple and pleases the deity. Fitness is the mother of sports. More fit the sportsman better the performance.

**Review of related Literature.**

Research evidences are readily available regarding the shooting skills and fitness components.

However, the researchers has reviewed literature and presented various aspects and information about the fitness, research works done around the globe, and literature on yoga for its justifiable inclusion in controlling skills.

The Researcher will collect all the reviews related from the library of Physical Education Department, University of Mumbai and the Library of BPCA’s college of Physical Education, Mumbai.

**Statement of the problem**

It was observed while watching the tight finish basketball matches that, the player’s leads to lack of endurance and get exhausted fast and suffer from back pain.

It was discussed and observed that the players should be given yogic training apart for Basketball practice and fitness.

Back pain is the most common reason to seek medical attention. The body according to Swami Sivananda the benefits of yoga, ‘the body becomes strong and healthy. Too much fat is reduced. There is luster in
the face. Eyes sparkle like diamond. The practitioner becomes very handsome. Voice becomes sweet and melodious.’

Justification of Study

Concentration plays a vital role in various games and sports where shooting performance is a predominate factor. For example, shooting ability is a deciding factor in football, basketball, hockey, rifle shooting, archery etc. in almost all sports ‘concentration’ is a key to success. If an athlete concentrates properly, he/she can face challenges in competitive situation. The question arises – how an athlete can improve the power of concentration? Although regular practice of archery or rifle shooting improves concentration to some extent, but its repetition may create boredom or monotony. Therefore, coaches include the lead up practices among the sportsmen.

In fact, Yoga works at the conscious level for awakening awareness (Bhole, 1989) which, in turn claims to improve concentration. The step-wise process in Yoga, viz., yama, niyama, asana, pranayama, dharana, dhyana and Samadhi develops awareness as well as concentration to the fullest extent to achieve success. The principles of these practices, in fact, work on the psycho-physio-neurological level that jeopardizes the unequilibrium state and provides a state of balance or homeostasis. Once an athlete reached this state of homeostasis, he can concentrate perfectly on his task of shooting performance and becomes successful.
Objective of the present work

1) To prepare separate “Training schedule” of yogic exercises on the basis of the principles of Yoga with a view to improve overall fitness and concentration among Basketball players.

2) To establish the effects of the said training interventions and conventional training methods in improving shooting ability in Basketball.

Hypothesis

The logical interpretation, stated above, and available research literature help to hypothesize that the exercises of the tradition “Yoga” may be useful in improving the fitness and shooting ability in Basketball.

Hypothesis will be tested after statistical analysis and interpretation of data accordingly.

Work Plan and Methodology

1. Sample

One hundred (N=100) Basketball playing male & female subjects, age group ranging from 16 to 19 years, will be pooled randomly as
sample. The criteria for inclusion and exclusion of the subjects will be as follows:

- The players who are the regular practitioners of Basketball will be included in the experiment.
- The subjects who are expected to remain present till the experimental trials are finished will be incorporated in this study.
- The subjects irrespective any community, willing to participate in this study, will be incorporated.
- The player’s sufferings from known serious health problems are to be excluded. Moreover, players having incapacitation physical illness as ruled out by clinical investigation will be excluded prior to the study.

2. Experimental Design

The subjects will be divided into two equal groups’ viz., Gr.A, and Gr.B. Group-A will participate in the “yoga Exercise Schedule”, and Group-B will be acted as “Control Group.” There will be daily 30 minutes practice considering the above schedules except Sundays and holidays. During daily experimental period while all the subjects of selected group will be involved with their respective training schedule, the subjects of control group will be kept busy with some recreational activities in physical education. Moreover, after completion of daily training schedule for 30 minutes along with shooting practice and all the experimental as well as control groups will combine participate in the same. The total duration of the experimentation will be at least for 6 months.
(including testing dates, Sundays and holidays) which includes the one experiment, one follow-up programmes to record the long term effects of the experiment and one detraining programme of 6 weeks each.

This is a randomized block design (Hubbard, 1973) which consists of the following steps:

**Step-I (Pretest)**

Shooting performance of the subjects belonging to control and experimental groups will be tested prior to the experiment by using standard tests of Basketball shooting (Cambell & Tucker, 1967). Some fitness components as required by Basketball players will also assessed by implementing standard tests (Frost & Cureton, 1977). The scores of shooting performance and fitness components will be recorded carefully.

**Step-II (Training / Treatment)**

After pre-testing, the subjects of experimental group will receive their respective training, as stated above, for 30 minutes daily which will be followed by a game practice as well as shooting practice in Basketball for 30 minutes. The subjects of the control group will be kept busy with recreational activities considering the
principle of physical education for first 30 minutes and they will also participate in the game practice well as shooting practice in Basketball for last 30 minutes daily. Thus all the subjects will be involved for a period of 1 hr. daily except Sundays and holidays. The duration of this experimentation will be for at 6 weeks.

**Step-III (1st Post Test)**

After completion of the 6 weeks of experiment, as stated above, all the subjects of both the control and experimental groups will be directed for 1st post-testing. Here the testing procedures will be same as mentioned in the pre-test.

**Step-IV (1st Follow-up Programme & 2nd Post Test)**

First follow-up (F.U.) programme will start for another 6 weeks after completion of 1st post testing (Step-III). In this programme, the subjects of all the groups (both control and experimental) will practice regularly 1 hr. day^{-1} except Sundays and holidays what they already learnt in step-II under the passive involvement of the teacher. After completion of the 1st follow-up programme of 6 weeks, all the subjects of both the control and experimental group will be instructed for 2nd
**Post Test.** Here the testing procedures will be same as mentioned in the pre-test.

**Step-V (Detraining Programme & Final Post Test)**

Detraining programme will start for another 6 weeks after completion of 1st Follow-Up programme and 2nd post testing (Step- IV). In this programme, the subjects of all the groups (both control and experimental) will not practice what they already learnt in Step-II. After completion of 6 weeks of **Detraining programme**, all the subjects of both control and experimental group will be instructed for **Final Post Test.** Here the testing procedures will be same as mentioned in the pre-test.

3. **Variables to be tested**

   - Shooting skills in Basketball (Cambell & Tucker, 1967).
   - Fitness variables as required by Basketball Players (Frost & Cureton, 1977).

4. **Tackling of Possible Problems during Experiment**

   (a) Problems about assigning equated groups for experiment may appear due to Randomization. Such problems may be tackled considering the age group and using the analysis of preliminary report of anthropometric, fitness and skill measurements. In fact, the baseline characteristics of
different experimental and control groups can be subjected to statistical analysis for significant difference.

(b) Lost to follow-up/ Drop outs may create problem leading to insufficient number of data that may spoil the significance and precision of an experimental research. In this case the addresses, telephone numbers etc. of all the participated subjects will be noted in the beginning.

(c) It is impossible to tackle both the groups by the researcher alone. Therefore, he will appoint professionally qualified experts, who have research experience at least at Masters’ Degree level in Physical Education, and they will be trained accordingly.

5. **Statistical Analysis**

The data collected will be analyzed by using descriptive statistics.

The treatment effects of the training procedures will be determined by applying standard statistical procedure ( ANCOVA followed by Scheffe’s post hoc test).