INTRODUCTION

Fencing is an elegant, prestigious and traditional sport which reflects the success qualities that are important to contemporary people who seek a challenge to both body and mind through a competitive blend of patience and determination, discipline and competitiveness. In fact, fencing is also referred to as physical chess by many proponents. While there may be a relevant comparison here, the physical aspect of fencing is underestimated more often than not in this analogy. Fencing is a game of the mind but it does require immense forethought, precise execution and great focus. Nonetheless, fencing is a game that demands physical power, agility and flexibility.

Professional fencers spend a lot of time being physically fit. The training routine involves exercises, weight training and stretches. Over the years, the importance of physical fitness has not been given as much importance by the athletes as it should be given. Individually, fencers do their regular runs, weight lifting and follow various other exercise routines while they should ideally be following a more specific routine to improve their fencing skills.

Fencing has many features and skills fencer should have to be distinguished by from other sports because it requires a great efforts in specific time with ability to do his best continually at uneven periods for one or two days. Therefore, there is need to develop special training program for fencers to attain the basic physical fitness and skill which is a key for success in fencing competitions. In this context it was thought to introduce yogic exercise program as a training part for elite fencers. As yoga is an ancient Indian system which helps to keep person physically and mentally fit. It has been scientifically proved that yoga helps to improve health related fitness and concentration which is a key factor for achieving success in competitions. In this investigation, therefore, an attempt has been made to see the efficacy of yoga training on health related fitness and fencing skills of state level fencing players.

Statement of the Problem

Fencing is one of the sports that need visual sense and concentration to determine the distance on performing different motor skills for marche, retraite, thrust, attack, parry and riposte
to reach the exact fencing distance for the beginner depending on visual sense of fencing distances between the competitors. Further, the ability to conduct a bout and use proper tactics is closely connected with the fencer’s psychological state, his power of concentration, and self control. Undue nervousness, over-excitation, lack of confidence, overestimation of the opponent’s strength, apathy, insufficient warming up, prevalence of inhibitory processes – all these factors may hamper the fencer in conducting a tactical bout, realisation of tactical solutions, and display of his technical abilities. Conversely, self-control, adequate level of arousal, consciousness of his own experience, and technical and tactical capabilities, positively influence the psychological state of the fencer, increasing his calm, assurance, dexterity and courage in action.

In fact, fencing needs high level of attention that becomes an important trait that characterizes each skill of attack and parry. The researcher himself is expert in fencing sport and through his experience the researcher noticed that there is a need to develop a training program which will be beneficial for elite fencers to achieve success in competitions. Further, traditional texts and mythological references revealed that Indian systems of physical exercises and rhythmic activities have tremendous influence for wholesome development of human-beings. However, the introduction of newly westernized fashion as well as techno-sports in our country diverted our young generation to participate in modern sports with the result so that our Indian system of traditional exercises are neglected and mostly forgotten.

Although there are various conditioning programmes, which are used for the development of various motor abilities they are vigorous and consisting of resistance exercise which is emphasized more on cultivation of strength and endurance. Every individual differs in his requirements of / different aspects and levels of physical fitness.

Today in Indian sport special attention and importance are given for performance related fitness, but not on the health- related- fitness. Enhancement of performance - related- fitness does not suffice one’s health related fitness. Therefore, although fencing players have performance related fitness, it is difficult to say that they have a sufficient level of health related fitness.
Numerous studies on yoga conducted earlier are sufficient to record its efficacy in improving physical fitness, limited information on health-related physical fitness of college level players is available. Further, no information on the impact of yoga for health related fitness and skill for fencing players is available so far. It was, therefore, thought desirable to undertake this experimental study entitled “Effect of Yoga on Health Related Fitness and performance of Fencing Players”.

Delimitation of the Study

- This study was delimited to the state level fencing players of age 16 to 20 years.
- This study was delimited to health related fitness and fencing skills.
- This study was delimited to 50 state level male fencers belonging to the state of Maharashtra.

Limitations of the study

While conducting the experiment, the present investigator has recorded some drawbacks/limitations as follows:

- The investigator had to restrict the Yoga training session for only one-hour daily. This duration should have been increased to record better results. However, depending up on the subjects’ availability the duration of the training session has been reduced.

- The subjects of the experimental as well as control groups were totally ignorant of yoga and had no background about the exposure of yoga practices. Although the investigator has taken proper care for teaching the same, however, such a situation may have adverse effect on their cognitive aspect of learning.
Problem and its Relevance

Fencing is an open-skilled combat sport that was admitted to the first modern Olympic games in Athens 1896. Modern fencing competition consists of three different weapons: the foil, the sabre and the épée, each contested with different rules. The actual matches represent only 18% of total competition time, with effective action time being 17 and 48 minutes. The physical demands of competitive fencing require a high level of aerobic and anaerobic conditioning. Further, the research reports indicate that body composition, is an important aspect in relation to an athlete's performance (Clarke et al., 2003). The ideal body composition varies by sport, but in general, the less fat mass, the greater the performance potential. Previous studies (Vender et al., 1984; Goldberg and Elliot 1985) have demonstrated that success in fencing depends more on technique, speed, and agility as opposed to a high aerobic capacity and low percent body fat percentage. Although the findings of the study may be true, numerous studies (Guizani 2006; Satoru et al., 2007; Durstine 2008) confirmed that aerobic training increases the fencers' reaction times, their attention capacities and causes an overall lower body fat composition. Furthermore, body fat distribution has been associated with atherosclerotic disease risk factors as well as injuries associated with back, knees, ankles joints and muscles problems (Dexter et al., 2007; Sheldon 2008; Lavie et al., 2009).

Furthermore, the physical demands of fencing are closely linked to the perceptual and psychological ones, and all are subjected to a continuous succession of changes during the bouts based on the behaviour of the opponent. For this reason it is difficult to identify a significant relationship between any one physiological characteristic and performance, and performance is more likely to be influenced by perceptual and neuro-physiological characteristics. Fencers need to anticipate the opponent and to mask their true intentions with a game of feints and counter-feints, which must be supported by an adequate psycho-physical condition to prevent central and peripheral fatigue. In fact, fencer needs to have high level of physical fitness and concentration. Recent research using 2006 Summer National epee fencers found that those who have high fear of failure are more likely to make mastery-avoidance and performance-avoidance goals (Athanas, 2007). In other words, those fencers who were afraid to fail were more likely to make goals that avoided failing, rather than making goals that aimed at winning.
Despite yoga’s wide popularity, there are limited numbers of randomized, controlled yoga studies using objective quantitative outcome measures, and these studies often have small numbers of subjects (Garfinkel et al., 1998). Hence, to evaluate the effect of yoga on health related fitness and performance in state level fencing players was planned.

**Objectives of the study**

The research work was carried out with the following objectives in perspective:

- To measure health related physical fitness of state level male fencers.
- To measure the fencing skill of elite state level fencers.
- To design specific yoga schedule especially for the fencing players.
- To see the effect of yoga training on health related physical fitness, and fencing skill of the state level fencers.

**Hypotheses**

After reviewing literature and related research studies, it has been hypothesized that-

H$_1$: There would be significant improvement in flexibility among the fencers with regards to yoga training.

H$_2$: Yoga training would help to improve abdominal muscles strength of the fencers.

H$_3$: Yoga training would be effective to maintain normal body fat percentage of the selected fencers.

H$_4$: There would be significant improvement in cardiovascular endurance among the fencers as a result of yoga training.

H$_5$: The yoga training may improve fencing skills of state level fencers.
Operational Definitions of the Terms used

Fencing

The history of fencing parallels the evolution of civilization, back from the days of ancient Egypt and Rome, to the barbaric Dark Ages, to the fast and elegant Renaissance, up to the modern, increasingly popular fencing of today. Fencing has always been regarded as more than a sport; it is an art form, an ancient symbol of power and glory, and a deeply personal, individual form of expression. Fencing is and always has been an intrinsic part of life, from the dueling and battle of yore to the widely captivating movies and facets of popular culture such as Zorro and The Princess Bride. The earliest evidence of fencing as a sport comes from a carving in Egypt, dating back to about 1200 B.C., which shows a sport fencing bout with masks, protective weapon tips, and judges.

Health Related Physical Fitness

According to AAHPERD (American Alliance of Health, Physical Education, Recreation and Dance), Health Related Physical Fitness can be viewed as, “Physical fitness is a multifaceted continuum extending from birth to death. Affected by physical activity, it ranges from optimal abilities in all aspects of life through high and low levels of different physical fitness, to severely limiting disease and dysfunction.”

Yoga

This is a system of systematic practice of different kinds of postures (Asana), Breathing (Pranayam) and meditation, which primarily aims at providing health and physical fitness at psycho-physiological level.

Significance of the Study

This study is significant in the following ways:

➢ The finding of this study may benefit to all the fencing players and even to other sportsman, since they can use yogic exercise to improve their suppleness of body.
➢ Fencer as well as athletes may be benefited with the inclusion of yoga in their training schedule.
The newly designed training schedule of yoga as a result of this study may be beneficial for the students participating in fencing event.

As yoga deals with the mental and emotional balance it is expected that the result of this study may help the elite fencers to keep their mental and emotional balance during the difficult practical situation i.e. during stress and tension due to their academic load.