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REVIEW ARTICLE

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A Study on Selected Motor Ability Variables of Men Athletes

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INTRODUCTION:-

Over the years, physical fitness has become the well-built foundation of a structure that supports many concrete blocks on it that represent all the various activities that make life worth living, intellectual life, spiritual life, love life and social life.

Fit people make a fit nation. The term “fitness” includes physical fitness, physiological fitness, mental fitness, cardiovascular fitness, social and spiritual fitness. Physically fit people are able to withstand fatigue for larger periods and are better equipped to tolerate physical stress.

In the modern world we have created powerful technologies and a variety of products. We are obsessed with accumulating power, wealth, property and objects--and yet we have not been able to create either individual or social peace, wisdom, or happiness. We have only to look around and see the destructiveness of our weapons, the emptiness of our pleasures and entertainments, the misuse of our material and personal resources, the disparities between rich and poor, and above all, the loneliness and violence of our modern world. We see that amid all our success in the external world, we have accomplished little of lasting value. These problems will not be solved through new technological developments. Instead, the resolution to these human problems will come only when we discover within ourselves that for which all of mankind is searching--inner peace, tranquility, and wisdom. This attainment is the goal of yoga, for yoga is the practical science intended to help human beings to become aware of their ultimate nature.

It is a known fact that adding regular physical activity to one's daily routine will improve health and well-being. And that physical activity doesn't necessarily need to be strenuous for a person to enjoy the benefits of health. Of course, by increasing the amount of physical activity (within reasonable limits), one can increase the benefits reaped.

One of the most important benefits of physical activity is that it actually lessens a person's risk of developing or dying from many of the most common serious illnesses. The risk of developing colon cancer, heart disease, high blood pressure, or diabetes is reduced through regular physical activity. Being physically active has also been proven to help build healthy bones, joints, and muscles. Furthermore, regular physical activity reduces the overall risk of dying prematurely from any cause. In fact, in 1995 the American College of Sports Medicine estimated that five times as many Americans die from being inactive than from car accidents.

Regular activity and exercise make for a healthier heart. A healthy heart is a strong heart that works efficiently. The heart pumps blood, which carries oxygen to muscles and carries away waste. How well the heart performs is a good indication of how healthy a person's cardiovascular system is.

Sports training consists of activities and movements which generally lead to high fatigue. Fatigue is the direct result of the load by physical activity. Load therefore, is of central importance in sports training. Without maintaining the load caused through physical exercise performance cannot be improved, stabilized and maintained because over load results in stagnation of performance.

Physical training refers to the processes used in order to develop the components of physical fitness-as for example, to improve aerobic endurance to stretch and relax muscles, to increase arm and shoulder strength. It aims to relate exercises and programmes to the specific requirements of individual sportsmen/games.

Sport training aims at improving sports performance. Therefore the nature and structure of sports performance determines to a great extent the means and methods of training as well as the total planning, organization, implementation ad assessment of training. The knowledge about the nature and structure of sports performance must be considered as the first and perhaps the most important step

towards the successful preparation of sportsmen for higher performance. The process of identification and development of sports talent also has to be based on this knowledge.

High sports performance is not merely the product of the physical, psychic and physiological pre requisites possessed by an individual sportsman. High performances are achieved after prolonged periods of training supported directly or indirectly by society. Therefore high performance should also be considered as an expression of social will and efficiency. It is now an accepted and proved fact that a society which actively and consciously supports the training and competition system wins more medals in international competitions.

STATEMENT OF THE PROBLEM

The present study was designed to find out the Effect of Varied Volumes of Interval Training on Selected Motor Ability Components, Physiological and Psychological Variables of University Men Athletes such as Speed, Agility, Explosive Power, Resting Pulse Rate, Respiratory Rate, Cardio Respiratory Endurance, Anxiety and Aggression.

HYPOTHESES OF THE STUDY

It has been scientifically accepted that any systematic training over a continuous period of time would lead to changes in human beings. Based on this concept, the following hypotheses were drawn.

1) There would be significant improvement on selected Motor Ability Components, Physiological and Psychological related variables due to the Effect of Varied Volumes of Interval Training.

2) There would be significant differences on selected Motor Ability Components, Physiological and Psychological related variables due to the Effect of Varied Volumes of Interval Training.

REVIEW OF LITERATURE

S. Berthoin(2010) assessed the impact of once-per-week training sessions on performance and fitness. Male (N = 57) and female (N = 64) students (age 14-17 yr) trained once a week on an intense or a moderate program of stimulation. Some Ss (N = 20) served as a no-training control group. Measurements were maximal aerobic speed (MAS) and running time to exhaustion at 100% MAS. The intense and moderate training programs differed by the ratio between continuous exercise (85% of MAS for 20-25 min) and intermittent exercises (between 90% for 3-min intervals and 120% for 10-s intervals of MAS). The intense program did more interval work and the moderate program recovers continuous work. Only in the intense group were significant changes noted. Males improved 5.7% and females 5.4% in MAS. There were no significant changes in time to exhaustion. If once per week training is to be undertaken by adolescents, the greatest gains will be derived from high-intensity interval work.

Interval training and continuous running were compared for effects on physiological adaptations. Untrained men and women were randomly assigned to four groups:

1) Running continuously at 75% HR max for four miles;

2) Running continuously at 75% HR max for two miles;

3) Eventually running eight one minute intervals at 90% HR max with three minute recovery intervals; and

4) no exercise control. Males (N = 24) and females (N = 35) completed. Training sessions were conducted three times per week for 12 weeks. Only the interval training group improved significantly more than the control group in VO_2max. The response to training was similar between genders, although values differed between them. There were no differences in percentage of body fat changes, triglycerides, cholesterol, and high density lipoproteins. Interval training benefits aerobic capacity more than continuous training.

Elite junior male soccer players were divided into an experimental group (N = 9) that experienced additional interval training as a stimulus for improving aerobic function for eight weeks, and a control group that trained normally. The interval training consisted of running 4 x 4-min at 90-95% HR max with a 3-min group between-repetition recovery and jog. The interval group was the only group that improved aerobic function. VO2max improved 10.7% and lactate threshold by 15.9%. Running economy improved by 6.7%; distance covered in a match increased by 20%; and work level (measured by HR) increased by 3.5%. The introduction of interval training in a season of endurance-based sport will increase the performance characteristics of athletes in competitions.

RESEARCH METHODOLOGY

SELECTION OF VARIABLES

Dependent Variables

Training involves constructing an exercise programme to develop an athlete for a particular event. This increasing skill and energy capacities are equal in consideration.

'Training' is applied now–a –days for any organized formation purposefully aimed at the rapid increase in the physical, psychological, mental and technico – motor performance capacity of men.

Speed may be developed, but is in large part dependent upon a person's genetic ability. Requirements for running speed are stride length; stride frequency, reaction time, acceleration, strength, power, endurance, flexibility and running form. Of all these components, stride length, stride frequency and speed endurance are most important and may contribute most to speed.

Agility, a motor fitness variable chosen for the study, may be explained as the physical ability which enables an individual to rapidly change body position and direction in a precise manner. Agility is an important component of motor fitness test and variable performance in shuttle run reveals the agility of an individual.

Winning performances require good technique, proper conditioning, and a strong competitive spirit. However, the ability to generate explosive, powerful effort on demand clearly separates elite athletes from the rest of the pack. Generating exceptional athletic power is only possible through a complete power-training program designed specifically with the athlete encage and his sport in mind.

Explosive power is a characteristic of the superior athlete. Speed and force are combined in athletic performance of high standards of excellence. The standing broad jump is most commonly used to measure leg power.

SIGNIFICANCE OF THE STUDY

1) The ultimate goal of research in Physical Education is to help coaches and physical educators train their athletes and players based on new concepts to improve their performance.

2) The study would add new knowledge in the area of sports training.

3) The results of the study may be useful to the professionals in Physical Education and Sports in the following ways.

i. Help to study the Effect of Low Volume Interval Training and High Volume Interval Training on selected Motor Ability Components, Physiological and Psychological related variables of university men athletes.

4) The study would provide guidance to Physical Educators and coaches to prepare training schedules

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