CHAPTER - I

INTRODUCTION

Sport serves vital and important role in social and cultural functioning for each individual. In the last few decades sports have gained tremendous popularity all over the globe. The popularity of sports is still increasing at a fast pace and this happy trend is likely to continue in the future also. The contribution of sports towards the overall welfare of the human society may be capsule in the following points:

a) Sports help in the all-around development of human personality.

b) Provide ample and healthy means for recreation and relaxation of human mind and body.

c) Are effective for rehabilitation and social adjustment to the injured, sick and handicapped.

d) Provide opportunities for social interaction thereby fostering peace and understanding among different people, nations, races, religion etc.

e) Perform preventive and curative functions for several diseases and ailments inflicting human body and mind.

f) Provide healthy and socially acceptable opportunities for the people and nations to compete against each other thereby touching heights to excellence of human endeavor and attainment.

The Norwegian Confederation of Sports, defined as "Sports are physical activities of a recreational character where the individual efforts of the participant determine the result."

Now a day, there has been an ever increasing focus on attention on the study of individual differences in research. In this regard a large number of researchers are engaged in comparing the motor performance of different sections of population in
terms of race or otherwise various regional backgrounds. The net results of their finding have been contradictory and there is no unanimity among the research scholars regarding inter-relationship between or the degree of influence.

To develop the motor components of the athletes, training is an essential aspect. The present study was considered with selected training programme so as to compile the physiological characteristics of Kho-Kho players selected from various schools of Delhi. The following trainings were adopted for improvement of motor abilities:

a) Circuit training  
b) Fartlek training  
c) Sprint and strides  
d) Shuttle Run  
e) Jig-jag Running

Physical fitness is an attribute required for service in virtually all military forces. Physical fitness comprises two related concepts: general fitness (a state of health and well-being) and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through exercise, correct nutrition and enough rest. It is an important part of life. In previous years, fitness was commonly defined as the capacity to carry out the day's activities without undue fatigue. However, as automation increased leisure time, changes in lifestyles following the industrial revolution rendered this definition insufficient.

Different games provided to do the body activities, differently. Kabaddi and Kho-Kho players are equally conductive to developing these skills amongst players. The theory of coordinative abilities is though it is rapidly getting recognition in the world of sports. However, there is no general agreement regarding the number of coordinative abilities required for sports.
The methods of evaluation of coordinative abilities have also yet not been finally formulated. The control regulation process is required to function in a particular which is further automatized in a great extent during skill performance. Motor coordination is a part of a action regulation and hence, closely linked with the process and regulation of cognitive psychic-abilities, (e.g., motives, derives etc.) movements and an execution aspect of an action (Hirtz, Menal and Schobel 1987) have pointed out that for coordinative ability these aspects of action regulation are important and dominant factors.

Coordinative abilities primarily depend upon the motor control and regulation process of control nerves system. The theory and motor coordination therefore is the basis of understanding the nature of coordinative abilities as mentioned by Bloume (1978). Different experts have described different number of coordinative abilities. Zacroskij (1971) stated that agility depends upon three coordinative abilities. According to Hirtz (1973, 1944) agility depends upon 18 coordinative abilities. He has pointed out five most important coordinative abilities such as:

1. Orientation Ability
2. Differentiation Ability
3. Reaction Ability
4. Balance Ability
5. Rhythmic Ability

Schnabel was of the opinion that the concept of agility be replaced by the concept of three following nature of coordinative abilities:

- Orientation Ability
- Differentiation Ability
- Reaction Ability
The extensive research was carried-out by Gundisch (1968), Zacroskij (1971), Blume (1979), Martin (1979) Mathieyew (1976), Hirtz (1985), Harse (1986) menial and Schobel (1987) regarding introduction of new and wide term coordinative abilities in place of agility as one of the basic component of physical fitness. For achieving excellence ‘Kabaddi and Kho-Kho’ in the field of Kabaddi, these components of physical fitness and coordinative ability must be possessed by the ‘Kabaddi and Kho-Kho’ in Kabaddi game. The researcher engaged in the present study has attempted to evaluate the degree of physical fitness and coordinative ability factor as possessed by the in Kabaddi and Kho-Kho game. He has further tried to compare the different between the physical fitness components and coordinative ability factor of the Kabaddi and Kho-Kho.

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Because of failing vision, unsteadiness, slower reflexes, vertigo, stiffness and muscle weakness, hazards easily avoided by younger people become significant for the elderly and falls are common. These are more dangerous than is often realized and are often fatal in their long term consequence. Osteoporosis makes old people, especially women, particularly susceptible to fractures, even from quite minor injuries and the resulting immobilization and decline in the level of activity can have grave effects. Chest and urinary infections commonly supervene and these may tip the balance against survival.

The physiology is a branch of biology concerned with the function of the body. Physiology is the science that treats the functions of the living organism and its parts. The term “Physiology” is a combination of two Greek words Physics means “Nature"
and Logos means “Science of Study”. Simply stated, it is the study of physiology that helps to understand how the body works.

As a scientific discipline physiology can be subdivided according to (1) the type of organism such as human physiology or plant physiology (11) the organizational level studied. Such as molecular or cellular Physiology or (111), a specific systematic function being studied such as neuro physiology, respiratory physiology or cardiovascular physiology”.

Physiology is the study of now human body function with the emphasis upon the specific cause and effect mechanism. Knowledge of these mechanisms has been obtained experimentally through the application of the specific method.

Sports psychology, the youngest of the sport science, is concerned with the psychological effect derived from participation. Today many outlets & Coaches look to sport psychology for a competitive edge by seeking psychological training Programme in order to learn among other thing, way to manage, competitive stress, central concentration, improve confidence & increase communication skill & team harmony. Competitive sports provides psychologist with many fascinating opportunities to explore the success with which people can control their own mental processes in the face of adversity. If paying attention is viewed as an effort to exert control over what we perceive & do, then the study of concentration in athletes offers a potentially fruitful new avenue for the study of how the mind works.

In this modern era of competition the psychological preparation of team is as much important as teaching the different skills of a game on the scientific lines. The team is prepared not any to play the games also to win the games it is not the proficiency in the skills which gives victory but more important is the spirit of the players, with which they play and perform their best in the competition.

Motor and Psycho-motor performances which exhibit rhythm city include simple reaction time, co-ordination as measured by a pursuit motor task, agility, and tapping speed. The close correlation between body temperature and motor performance
persists in shift workers during adaptation of both rhythms to a nocturnal regimen.

The ties between body temperature and motor performance suggest that exercise is the best performed at the crest time of core temperature. The optimal core and muscle temperature for exercise is about 38.3c and 40c respectively, the resting temperature is closest to these values in the evening.

“Mental Toughness” surface to an individuals and inner derive to succeed particularly when the going is challenging. It explains when it is possible to place two individuals in to the same working environment and see that one find it difficult to cope with pressure and one thrives Mental toughness also illustrates a strong link between stress management & peak performance development where the letter can’t be achieved without performer.

Health and Physical Education is defined as the process by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of health. It is a continuing process of informing people how to achieve and maintain good health; of motivating them to do so; and of promoting environmental and lifestyle changes to facilitate their objective.

Statement of the Problem:

The proposed of the study will be study A COMPARATIVE STUDY ON SELECTED PSYCHO-PHYSICAL FITNESS COMPONENTS OF KABADDI AND KHO-KHO PLAYERS OF DELHI SCHOOLS.

Delimitations of the Study:

The proposed study will have the following delimitations:

1. The proposed study will be delimited to select 100 male subjects age ranging from 16 to 19 years of Delhi schools, who has participated in Inter-Zonal and School National (SGFI) Junior National of Kabaddi and Kho-Kho competition.

2. The proposed study will further be delimited to 100 male players’ at schools levels, out of which 50 male players of Kabaddi and 50 male Kho-Kho players will be selected finally.
3. The proposed investigation will be delimited to the specific variables such as: physical and psychological parameters mentioned here as under:

1. **Anthropometric Components:**
   a. Height
   b. Body weight
   c. Body Mass Index (BMI)

2. **Physical Fitness Components:**
   a. **Speed:** 40 m. Sprint
   b. **Explosive Strength:** Standing Broad Jump
   c. **Cardiovascular Endurance:** 12 min. Run/Walk Test
   d. **Coordinative Ability:** 4X10 m. Shuttle Run
   e. **Flexibility:** Sit and Reach Test

3. **Psychological Components:**

   The Psychological abilities measure with selected tests as under-
   a. **Psycho-motor Ability:** Eye-hand Coordination Test
   b. **Concentration:** Grid Concentration Test
   c. **Sports Competition Anxiety Test** (SCAT)

**Significance of the Study:**

The findings of the study may have the following significance and contribution to the related field. The findings of the study will have the significance of self-assessment of physical fitness abilities factors and psychological aspects of Kabaddi and Kho-Kho players:

1. The proposed study may seek the significance through the comparison of the factors between the of Kabaddi and Kho-Kho players.
2. The study may have significant of making training schedule for the players, coaches, trainers and physical education teachers for Kabaddi and Kho-Kho players to develop psycho-physical fitness of sportsman.

3. The proposed study may contrary to the significance to select the Kabaddi and Kho-Kho players on the basis of the evolution of psycho-physical fitness abilities factors as proceeded by the individuals.

4. The proposed study may have significance of proposing guideline and index for future researchers in the field of Kabaddi and Kho-Kho.

**REVIEW OF RELATED LITERATURE**

The research scholar made an attempt to present a summary review of the related literature, which may be helpful in understanding the basic trends available and to bring-out the meaningful outcomes of the proposed study. The scholar tried his level best to gather the best available literature.

Siddhu and Kumari1993, suggested about the relationship between activity and blood pressure level among 500 adult individual of Punjab positive association between physical activity and Systolic and Diastolic blood pressure were observed in the study further in majority of age groups person with light physical activity show marked higher incidence of hypertension than their medium and heavy physical activity counterpart.

Bhomik1993, conducted a comparative study on selected physiological parameter between Soccer and Kabaddi players. The purpose of the study was to compare and contrast the selected physiological parameters between soccer and Kabaddi players. Total 30 players from the Kabaddi and soccer (15 from each) were selected randomly land only from the Intercollegiate terms of Amravati University. The physiological parameters selected as criterion were blood pressure, vital capacity and resting pulse rate. The “t” test was computed to find out the significance differences between the mean. It was concluded that Kabaddi players were significantly superior in vital capacity whereas soccer players were significantly superior in resting pulse rate in comparison to
their counterpart but in case of blood pressure non-significance difference were found between the two groups.

Jones and et al.2001 conducted a study with a purpose to extend existing sport psychological research by developing a more comprehensive athlete attitudinal survey the sport performance inventory (SPI). A multiple item survey consisting of sport related attitudinal items was distributed to 274 students athletes enrolled in a large division Midwestern university. A Principal components analysis with varimax rotation performance on the original survey items resulted in an 83 item survey items resulted in an 83 items survey with 6 interpretable factors: competitiveness, team orientation, mental toughness emotional control, positive attitude, and safety consciousness, all subscales demonstrated adequate items discriminate-ability internal consistency important statistically significant differences between college invoice and male / female athletes were found: (1) college athletes were found to have a higher SPI composite than novice athletes; (2) college athletes were found to have a more positive attitude than novice athletes; (3) college athletes were more competitive than novice athletes; (4) female were more them oriented than males; & (5) novice males were more competitive than novice female, while female were more competitive than college males.

Loehrs1996,constructed Psychological Performance Inventory (PPI), the most influential mental toughness instrument measured through the seven most important psychological factors that reflect mental toughness: self-confidence, negative energy, attention control, visual and imagery control, motivation, positive energy and attitude control. The PPI is a 42 item self-report instrument designed to measure factors that reflect mental toughness. All questions in the PPI were answered using a 6-point Likhert type scale, ranging from ‘1’ (False) to ‘6’ (True).

Davis et al.1998, investigated mental toughness and assessed casual explanations for positive and negative reactions to imagined events using an attributional style questionnaire pessimistic explanatory style on this scale were a risk factor for negative affect and behavior following negative events. 38 elite athletes (minimum age 17.8 years) in Ice-hockey were rated for mental toughness shows. Composite explanations of
negative events that was more internal, stable and global for players above the median. The results suggest that a pessimistic explanatory style may benefit hockey performance.

**Objectives of the Study:**

The main objective of the proposed study is to find-out the difference between Kabaddi and Kho-Kho players at senior secondary school level in regards to their psycho-physical variables. The main purpose is more elaborately defended as the flowing sub-objectives:

- To find-out the different between physical fitness components of Kabaddi and Kho-Kho players such as speed, explosive strength, cardiovascular endurance, coordinative ability, and flexibility.
- To find-out the difference between the Kabaddi and Kho-Kho in sports competition anxiety, concentration level and psychomotor ability.

**Hypotheses of the Study:**

After going through the review of the related literature, the investigator is proposing the following hypothesis:

1. There will be no significant difference in physical fitness factors of Kabaddi players and Kho-Kho players.
2. There will be no significant difference in psychological factors of Kabaddi and Kho-Kho players.

**PROCEDURE AND METHODOLOGY**

In this chapter, the research scholar will explain, how the proposed study will be conducted. The procedure will be explained in line with the delimitations, objectives and selected variables and protocol of testing procedures. For the purpose of the proposed study, the applied procedure and methodology will be explained, which will be adopted under the following headings like: selection of the subjects, selection of the variables and their tests, design of the study, instrumental reliability, reliability of data and subjects,
administration of the tests, and administration of anthropological tests, physical fitness and psychological tests items to assess the psycho-motor ability, collection of the data and statistical procedure applied for the study, will be described in details:

**Selection of the Subjects:**

Initially, one hundred Kabaddi and Kho-Kho players will be selected on random basis for the proposed study. The selection of the subjects will be considered, those have participated in Delhi School’s Zonal, Inter-zonal and School National Games represented respective team of Delhi Schools. It will also be taken into consideration that all the selected subjects will be ranged from 16 to 19 years of age and who will be involved in regular practice for their respective games of Kabaddi and Kho-Kho to remain physically and mentally fit. Finally, total 50 players will be randomly selected from Kabaddi and 50 players will be selected from game of Kho-Kho. It will also be kept in mind that all the subjects should participate voluntarily for purpose of data collection during proposed study.

**Selection of the Variables:**

For the proposed study, the selection of the variables will be of utmost important as the total procedure and administration is dependent upon the nature of selection of variables. The experts will also be consulted to get appropriate and rational suggestions to finalize the variables. The following are the proposed variables for the proposed study:

I  **Anthropological Components:**
   a) Height
   b) Body Weight
   c) Body Mass Index (BMI)

II  **Physical Fitness Components:**
   a) Speed
   b) Explosive Strength
c) Cardio-vascular Endurance  
d) Coordinative Ability  
e) Flexibility  
f) Muscular Strength  

III Psychological Components:  

The following are proposed variables to assess the psychological abilities, which will be measured through their rational test items:  

a) Psycho-motor Ability  
b) Concentration  
c) Sports Competition Anxiety Test (SCAT)  

Design of the Study:  

The design of the study is to compare the groups specified for Kabaddi and Kho-Kho in relation to the selected variables related to psycho-motor abilities. The selected variables will be measured after finalizing the specific test items.  

Administration of the Test Items:  

The selected test items will be administered as per the guidelines.  

Collection of Data:  

The collection of data will be completed during morning hours on three different with the help of physical education teachers and coaches.  

Reliability of Data:
The reliability of data will also be established by conducting testers’ competency and instrumental reliability by means of test-retest method.

**Testers’ Competency:**

The testers’ competency will be established by test-retest method. The performance of randomly selected 10 subjects was taken prior to collection of data and again next day on the same randomly selected subjects.

**Instrument Reliability**

For the purpose to test all the instruments will be used of high standard and reputed companies and will also be calibrated by the respective companies.

**Statistical Procedure:**

For the purpose of the analyses, the following statistical procedures will be employed:

In first step, descriptive statistics was employed in which Mean; SD, Minimum and Maximum scores will be computed. The required statistical calculations will also be computed with the help of SPSS software. The descriptive calculation and ‘t’ test will be computed. Then, both the groups will be tested to observe the differences among the selected variables. The level of significance will set at .05 level of confidence.

**References:**