SUMMARY, CONCLUSIONS & recommendations

The present era is the age of science and technology. The advancement in socio-economic and technological field apart from bringing progress has also created complexities, stress and anxiety in the daily life of people. No longer are the civilized men the victims of famines and epidemics - but the black plague has been replaced by a host of subtler, psychological plagues - worry, insecurity, disillusionment and doubts which have made it difficult for the modern man to lead an adjusted life. The basic requisite for leading an adjusted life is the provision of appropriate environment and the adequate means for living - first survival and then a full term, long, healthy life full of happiness.

Modern man's path to happiness is not an easy one. It is beset with seemingly endless personal and social problems. Excessive competition, conflicting pressure groups, rapid social change, and threat of global wars have aggravated man's insecurities and emotional stress, drained human energy and happiness in a way that can be seen in the millions of victims of depression. Depression triggered by stress has led to dissatisfaction. The growth of prosperity and march of consumerism has not created hope and satisfaction in life. What was once a luxury has now become a common expectation. This makes its absence a source of dissatisfaction. The craving for more has become the way of life. Some want more money while others crave for good position and so on and so forth. Life is mostly seen from quantitative rather than qualitative point of view. The materialistic attitude is prevalent globally and in all spheres. Man has become a victim of passion, jealousy and arrogance. S/he is dissatisfied, unhappy and discontented due to unaccomplished tasks and desires.
There is no harmony between his inner and outer self. The feeling of emptiness, tension and meaninglessness prevails everywhere and in all walks of life.

Every individual has different desires, wishes, ambitions and aims in life that are to be adjusted. Some want to gain recognition, appreciation while others crave for psychological balance.

Maslow strongly believes that human being is a wanting animal and he never reaches a state of satisfaction. According to him, “when certain needs and desires are satisfied, at once, others and higher needs emerge and when these in turn are satisfied, again new and still higher needs emerge and so on and so forth.' Man experiences obstacles and interference in his attempt to achieve them. This creates problems and serious and deliberate efforts have to be made to overcome these impediments. The obstruction, internal or external barrier, restriction or interference in accomplishment leads to maladjustment and discontentment thus leading to disharmony between inner and outer self. All this creates confusion, chaos and turmoil in life whereas the successful accomplishment always leads to happiness and contentment.

Education Commissions, especially, *Kothari Commission* (1964-66) emphasized that physical education activities and sports do contribute not only to physical fitness and health, but also to physical efficiency, mental alertness and development of certain qualities like perseverance, team spirit, leadership qualities, obedience to rules and loyalty to leaders, moderation in victory and balance in defeat, sociability and many other values of life processes and high achievements.

Chhagla, the Education Minister of India in 1964 said: "Sports are a means to achieve national integration and emotional stability."

Stress and Maladjustment in life of players can lead to exaggerated
rigidity, inflexibility and anxiety. Those players having stress display low tolerance, feel emotionally and physically exhausted and display low commitment to work and game. Adjustment is the most crucial factor for life satisfaction as well as performance. (Yelamanchile, 2006)

Stress at work resulting from increased complexity of work and its divergent demands has become a prominent feature of modern organizations extending impairing effects on players, physical as well as mental ill health (Kyriacou, 1987; Rastogi adn Kashyap, 2001). Stress at work has been reported to significantly impair the relationship of players with his skills and the quality of performance and the commitment with which s/he is able to perform (Davis, 1981, Srivastava 1983, Bekarthu and Gold, 1984, Shaan, 1998). Though a moderate degree of stress has been noted creating as well as promoting players inclination towards work, excessive and consistent stress results in dissatisfaction, tension, anxiety, depression, less adjusted and in some cases even serious, mental and physical disabilities ranging all the way to diseases (Srivastava, 1991).

Stress has roots in work environment but adversely affects attitude, performance, skills, behaviour and health of the players. Mental health is absolutely necessary if one has to face all personal and professional problems adequately. The emotional difficulties of the individuals/players are often revealed in their treatment of circumstances or barriers. When sportsmen lose control or resort to sadistice forms of performance there is little doubt that their skills or ability springs from some emotional instability. The highest degree of mental health permits an individual to realize the greatest success with his capabilities and derive maximum adjustment in life.

Stress can be defined as a perceptual pheonmenon arising from a
comparision between the demands on the person and his or her ability to cope. An imbalance in this mechanism, when coping is important, gives rise to the experience of stress and to the stress response. Stress may be defined as a real or interpreted threat to the physiological or psychological integrity of an individual that results in psychological or behavioural responses.

Martens, Vealey and Burton (1990) stated: “Stress has been defined as stimulus, intervening and response to variables by different researchers. As a stimulus variable stress is a precipitator; as an intervening variable, a mediator, and as a response variable, a behaviour.”

Stress and anxiety affect everyone daily, but research has found that many athletes struggle with these conditions more than the rest of the population. “Despite the well-documented benefits from exercise and sports participation on mental health, some athletes will at times experience psychological, emotianal, and behavioural problems” (Mann, et al, 2007). “Many factors which can influence the performer’s psychological state and so alter it from the optimum required for their performance” (Graham-Jones and Hardy, 1990). Many athletes struggle to handle the stress and anxiety that comes along with a full class load, the demands of their sports, as well as the pressures of their family and friends. Athletic trainers need to be sure they help their athletes utilize the counselling center, and other techniques to help limit their stress and anxiety.

A well adjusted player will have positive attitude towards his event/game and will be in a position to apply modern sophisticated and scientific technology to his game. On the other hand a less adjusted player can do incalculable harm to the nation as s/he won't be able to do
justice to his/her duties. Adjustment results from fruitful synthesis of thought and action.

Erik Erikson’s statement on individual development (1968), "The ability to accommodate oneself to changing circumstances is a mark of maturity", could easily be interpreted as a definition of "adjustment".

According to Shaffer, "Adjustment is a process by which a living organism maintains a balance between its needs and the circumstances that influence the satisfaction of these needs".

According to Crow and Crow, "An individual's adjustment is adequate, wholesome or healthful to the extent that he has established a harmonious relationship between himself and the conditions, situations and persons who comprises his physical and social environment".

According to Kundoo and Tutoo, "The term adjustment refers to a harmonious relationship between the person and the environment”. The degree of harmony depends upon two things (i) certain potentialities within a person and (ii) character of the environment.

According to Calhoun and Ross, "Adjustment is your continuous interaction with yourself, with other people and with your world".

According to Fraser, "Adjustment can be thought of in straight forward terms as the capacity to stand up to emotional pressure and one of the most consistent and inescapable sources of pressure is contact with other human beings, with their moods and feelings their demands and their irrationalities".

Larson (1941) defined general motor ability as the "Ability of the individual in the elements which lie under motor performance, such as, muscular strength, muscular power, muscular endurance, coordination, agility and balance".
Barrow (1957) used a jury of expert physical educationists who defined general motor ability as composed of the following eight factors: (1) Arm and shoulder co-ordination, (2) flexibility, (3) power, (4) hand-eye and foot-eye coordination, (5) speed, (6) strength, (7) balance and (8) agility.

According to Clarke (1987) "General motor ability has been considered as one's level of ability in a wide range of activities. It has been thought of as an integrated composite of such individual traits as strength, endurance, power, speed, agility, balance, reaction time, and co-ordination traits underlying performance in many motor complexes."

According to Backert (1974), the ability of an individual to perform specific motor patterns which commonly occur as the acceptable physical activities of our culture, is another aspect of coordination which has been labeled motor ability.

In the words of Johnson and Nelson (1982), "It is an acquired and innate ability to display fundamental motor skills rather than highly specialized sports events."

Borrow and McGee (1971) further elaborate the above definition when they define motor ability as "the present acquired and innate ability to perform motor skills of a general or fundamental nature, exclusive of highly specialized sports or gymnastics techniques. It is one's level in wide range of activities."

behaviour, coping strategies) work related factors (inadequate salary, low status, organizational climate, insensitive administration, low status) general factors (personality type, frustration, pressure, self acceptance, adjustment, motor ability). In the studies, the player is perceived as a person exposed to stress from variety of sources. Out of the various possible predictors of adjustment among players as evident from earlier researches, stress, adjustment and motor ability with personality type were selected for the present study since not much work has been done on these variables. Hence the present study.

Personality is the whole man, his inherited aptitudes and capacities, all his past learning, the integration and synthesis of these factors into characteristic behaviour patterns, his ideals, values and expectations, “Adequate and proper development of an athlete’s personality reinforces his/her capacities and potentialities.

The word personality has been derived from the Latin word ‘Personae’ which means “to sound through”. This term was used to describe the voice of an actor speaking through.

Psychologists have defined personality in different ways. Valentine’s view is the sum total of ‘Innate and acquired’ dispositions whereas boring’s view deals with ‘an’ individual adjustment to his environment.’ Morton views personality as the ‘biological innate dispositions, impulses, tendencies, aptitudes and the instincts of the individual’. Munn views personality as the ‘integration of an individual’s structures, modes of behaviour, interests, attitudes, capacities, abilities and aptitudes’. Rexroad explains personality as “the balance between socially approved traits”. Dashiell views personality as his system reactions.

Another definition arrived at by “Gordon Allport” after an
examination of fifty definitions of personality is “the dynamic organisation within the individual of those psycho-physical systems that determine his unique adjustment to his environment”. This definition emphasizes the adjustive processes in the development of an individual personality. An individual’s inherent needs, urges, or drives serve as motivation of behaviour toward satisfied goals. If the individual fails to achieve one or more of these behaviour goals, there may occur a disorganisation of his personality unless a changed mode of action results in the satisfaction of the need. The words ‘dynamic organisation’ refer to the idea that the characteristics of personality interact with each other. The word ‘physical’ means that personality contains both mental and physical elements and the word ‘determine’ refers to the idea that personality is considered as the cause of behaviour. This is an adequate definition and explains the personality quite clearly.

In sport psychology, predicting athletic achievement from personality characteristics has long been considered one of the attractive applications (cf. Apitzsch, 1995; Cooper, 1969; Deary & Matthews, 1993; Diamant, Byrd & Himelein, 1991; Eysenck, 1995; Greenberg & Greenberg, 1992: Liwei & Leahy, 1993). A wide variation of personality traits have been found to be associated with levels of achievement (Davies & Mogk, 1994; Kirkcaldy, 1982; Morgan, 1979) in a number of sports, including basketball (Evans Quarterman, 1983), hockey (Williams & Parkin, 1980), American football (Daus, Wilson & Freeman, 1986; Kroll & Petersen, 1965; Kroll & Crenshaw, 1968; Schurr, Ruble, Nisbet & Wallace, 1984), mountaineering (Magni et al., 1985), rowing (Morgan & Johnson, 1978) and other endurance sports (Egloff & Jan Gruhn, 1996; Morgan et al., 1988). However, the specific personality predictors found in earlier research, vary so dramatically from study to study, that they make generalisations next to impossible (Auweele et al.,
2001). Not surprisingly, the debate between the “sceptical” and the “credulous” views on personality and sports (Morgan, 1980) continue, despite substantial progress towards its resolution (cf., Rowley, Landers, Kyllo & Etner, 1995; Singer, Hausenblas & Janelle, 2001). Is personality really so irrelevant in sports as suggested by the sceptics? Or has the earlier research just been unable to effectively detect its influence, as would be argued from a “credulous” point of view?

Modern researches in sport science, which maximally include sports psychology, are directed to determine general and common disposition of sportsmen’s personalities, which appear in sport in general or in some sport disciplines and provoke sportsmen to behave in a same or similar way. It is beyond any dispute that the results produced by a great number of researches (Vanek et al., 1974; Singer et al., 1977; Vealey, 1992; accord. Wann, 1997; Keramiciev, 1999; Aleksovska, 2002) reflected the fact that it is not possible to identify a unique general model of a successful sportsman’s personality, which was implicitly expected by the researchers. However, there exists an opinion that identification or some specific dispositions or groups of dispositions is possible and especially the ones with the degree of express characterizing the top sportsmen behaviour and which, at the same time, determines success in sport. Besides this general approach, it is necessary to continue to apply the results of researches which make the identification of specific personality features or relevant psychological dispositions possible and not only for the purpose of sport in general but also for specific disciplines of sport. Lots of authors have mentioned the presence of specific psychological structure of a sportsman’s personality depending on the type of sport and which, certainly, includes presence of relevant psychological features in the structure of a spotsman’s personality, which lead to high sport results achievements and which determine sport success.

Numerous studies have reported positive mood benefits from exercise (Berger and Motl, 2000). Mood-enhancing effects have been evidenced in many different physical activities, including jogging, swimming, yoga, and weight lifting (Berger and Owen, 1988; Dishman, 1988; North et al. 1990). In their extensive review of the salient literature, Berger and Motl (2000) emphasized that mood enhancement is dependent upon interactions between participant, exercise modality and practice conditions; and made several recommendations for structuring an exercise session to maximize mood enhancement. They suggested that activities should be non-competitive, rhythmic, and predictable should last for at least 20-30 minutes and should be moderately intense. However, despite considerable research into the mood-enhancing benefits of exercise, the role of individual factors such as personality remains unclear.

Research in general psychology has identified relationships between mood responses and the personality dispositions of extroversion and neuroticism (Costa and McCrae. 1980: Eysenk and Eysenk, 1975; Hepburn and Eysenck, 1989; McFatter, 1994). For example, Eysenk and Eysenk (1975) reported that individuals high in extroversion are typically active and lively, while individuals high in neuroticism tend to be apprehensive.

All the above is more true in case of Volleyball players because these are the foundation of players personality, attitude, habit, tactics, skills and communication capabilities as laid down by the sports authorities.
The area of stress adjustment, general motor ability and personality has a lot of things to offer and therefore, it attracted the attention of the researcher. The researcher was a volleyball player at the State and National level has experienced and observations the players shown the lack of adjustment and stressor at the time of selection of the team and playing the game. It was, therefore, a matter of interest for the researcher to undertake a study and then find out the difference between extrovert and introvert players with regard to variable stress, adjustment and general motor ability. The research problem under taken in the study was stated as:-

“A Study Of Stress, Adjustment And Motor Ability Between Extrovert And Introvert Volleyball Players.”

Rationale of the Study

We are living in the age of growing complexity and pressures where human constitution and capacities are being taxed severely. Stress has become a predominant feature of modern life exerting far reaching effect on the behaviour and adjustment on as well as off the work. The stress and strains experienced in one domain are carried to the other. Bottling up of stress makes the situation worse at later stage when one has reached the limits of one's capacity to endure it. This adversely affects physical, mental and emotional health of the player/individuals, which reduces person's motor ability and physical ability to perform well in his/her daily life. Only a mentally healthy person is able to deal with the problems as and when they arise. One enjoys mental health to the fullest extent if one accepts and respects life in its very shape and existence. On
the other hand a mentally unadjusted person fails to develop a positive and healthy self concept and does not attain a happy concept of game and sports. At the same time, such a person has poor ability, perception and lacks proper adjustment in life. A well adjusted and stress free person has a state of mind that enables him to experience the greatest amount of happiness and attain the maximum sufficiency in life in spite of the pressure of strain and conflict. Stress can lead to reactions like empathy, fatigue, aggression, anxiety, conflict and neurosis. It is injurious in terms of money, time, attitude, aptitude, skills, motor ability etc. since the players are the architects of physical education game as well as minds of young, future citizens are moulded by them. Therefore, the sportsmen and players must be adjusted in their life and team so that they can deliver the goods to the best of their ability. Researcher have drawn attention towards various psychological, physiological and personal factors leading to stress and lack of adjustment among players. However the problem of stress and lack of adjustment among volley ball players with regard to their personality dimension still lacks attention and probe. Hence the present study.

**Operational Meaning of Important Terms:**

1) **Stress:** The word stress is defined as “A State of Affair Involving Demand on Physical or Mental Energy”. Stress is a condition that disturbs the individual’s psychological and or physiological state such that he/she is forced to deviate from the normal functioning. Stress is a perceptual phenomenon arising from a comparison between the demands on the person and his or her ability to cope.

2) **Adjustment:** Adjustment is a continual process by which a person varies his/her behaviour to produce a more harmonious relationship between himself and his environment and hence
better human achievements. In this study adjustment has been defined as a satisfactory relationship between individual and the environment.

3) **Motor Ability**: It may be defined as one’s present innate and acquired ability to perform motor skills of a general and fundamental nature excluding specialized sports skills. It is synonymous with general motor ability. General motor ability is also defined as one’s inherent potential to perform vigorous motor activities to the best of one’s capabilities. In the present study eight components of motor ability are enlisted and defined below:

**Speed**: Speed may also be defined as “rapidity with which a movement or successive movements of the same kind may be performed by an individual.”

According to Barrow and Inc Gee (1971), “One’s ability to perform successive movement of the same pattern at a fast rate”.

**Agility**: Agility is an important component of general motor ability in majority of the sports activities. Especially in badminton, tennis, trampoline, gymnastic, football, volleyball, hockey, basket ball etc.

Agility means quick and swift movements and ability of quick apprehension of body movements. Agility may be defined as “One’s controlled ability to change body position and direction rapidly and accurately”.

**Arm and Shoulder Strength**: Strength may be defined as the
maximal muscular force or tension used in the creation or prevention of the movement in one maximal effort of a muscle group.

The ability of a muscle to maintain a certain level of force or to repeat identical movements or pressure over the maximal period time with one’s maximal effort.

**Leg:** Strength is the component of power which does not usually refer to time and distance. In strength measurement, the object of resistance is nearly representing the maximum load.

**Balance:** Balance is an important factor in physical activities like gymnastics, defensive position in wrestling, diving and some other individual and team events or games.

Balance may be defined as one’s ability to maintain the body’s centre of gravity over the centre of supporting base of the body.

**Muscular Endurance:** Endurance is the ability to do sports movements, with the desired quality and speed, under conditions of fatigue. The muscular endurance or stamina enables an individual to perform sustained work by a particular muscle group over a period of time.

The muscular endurance may be defined as “the ability of a muscle to maintain a certain level of tension or to repeat identical movements or pressure over the maximal period of time with one’s maximal effort”.

**Flexibility:** Flexibility means the range of movements around the skeletal joints of the body. The flexibility is not a general body character but it is specific to each body region.
Flexibility may be defined as “the range of motion around a joint as determined by the elasticity of the muscles, tendons and ligaments associated with the joint under consideration.”

**Hand-eye Coordination:** Coordination is one’s ability to efficiently and effectively integrate the movements of different body parts especially during quick momentary actions of various types and the ability of the performer to integrate various types of body movements into specific patterns Coordination skill is characterized by muscle control, accuracy and steadiness in judging such variable factors as speed, distance, direction, size, depth etc. Most important type of coordination involving many sports skills is related with the co-ordination of eyes with hands, feet and head. In many of the sports activities eyes have to concentrate on a moving ball or similar object while body or parts of body have to adjust accurately in relation to the moving object for performing hitting, kicking, batting, catching, throwing, fielding, servicing etc.

1) **Extrovert:** Eysenk regards the extrovert as a sociable, party goer, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He is carefree, easy going and likes to laugh in one’s sleeve, always has ready answer and generally likes changes.

2) **Introvert:** Introvert is a quite, reitreving sort of person, fond of books rather than people, they are reserved & distant except to intimate friends and distrust impulsive movement. They keep their feelings under their control, seldom behave in an aggressive manner, and lose their temper easily.
3) **Volleyball Players:** For the purpose of present study volleyball players are all those players, who play the volleyball game, belonging to North Zone State.

**Objectives of the Study:**

Every research is done keeping in view certain objectives which are to be accomplished during the study. The present study was undertaken keeping in view the following objectives:

To compare the stress of extrovert and introvert Volleyball players.

To examine the adjustment of extrovert and introvert volleyball players.

To evaluate general motor ability of extrovert and introvert volleyball players.

**Hypotheses:**

Under this study the following null hypotheses were formulated and tested for significance:-

1) There is no significant difference between extrovert and introvert volleyball players with regard to their stress.

2) There is no significant difference between extrovert and introvert volleyball players on the frustration component of stress.

3) There is no significant difference between extrovert and introvert volleyball players on the conflict component of stress.

4) There is no significant difference between extrovert and introvert volleyball players on the anxiety component of stress.
5) There is no significant difference between extrovert and introvert volleyball players on pressure component of stress.

1) There is no significant difference between extrovert and introvert volleyball players with regard to their adjustment.

6) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘home’ adjustment.

7) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘health’ adjustment.

8) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘Social’, adjustment.

9) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘emotional’ adjustment.

10) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘Educational’ adjustment.

1) There is no significant difference between extrovert and introvert volleyball players with regard to their general motor ability.

11) There is no significant difference between extrovert and introvert volleyball players with regard to ‘speed’ component of general motor ability.

12) There is no significant difference between extrovert and introvert volleyball players with respect to ‘Agility’ component of general motor ability.

13) There is no significant difference between extrovert and introvert
volleyball players with respect to ‘Arm and Shoulder Strength’ component of general motor ability.

14) There is no significant difference between extrovert and introvert volleyball players with respect to ‘Leg Strength’ component of general motor ability.

15) There is no significant difference between extrovert and introvert volleyball players with respect to ‘Balance’ component of general motor ability.

16) There is no significant difference between extrovert and introvert volleyball players with regard to their ‘Muscular Endurance’ component of general motor ability.

17) There is no significant difference between extrovert and introvert volleyball players on the ‘Flexibility’ component of general motor ability.

18) There is no significant difference between extrovert and introvert volleyball players with respect to ‘Right Hand Eye Coordination’ component of general motor ability.

19) There is no significant difference between extrovert and introvert volleyball players with respect to ‘Left Hand Eye Coordination’ component of general motor ability.

**Design of the Study**

The present study can be described as exploratory descriptive survey. It is exploratory in the sense that is sets out to find the difference between stress, adjustment and motor ability of Volleyball players with regard to their personality type which is almost an unexplored area. A
descriptive study is concerned with functional differences that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing (Best, 1999). The survey method gathers data from a relatively large number of respondents representing specific population. The survey method of research involves a clearly defined problem and definite objectives. In order to find out the nature and extent of difference in extrovert and introvert Volleyball players with regard to variables stress, adjustment and motor ability a ‘t’-test was employed to find out the difference between two groups of Volleyball players on the basis of personality dimension (Extraversion and Intraversion) as given by Eysenck.

**Population of The Study:**

All the Volleyball players of North Zone State was the population of the present study.

**Sample:**

The present study was conducted on a sample of 600 Volleyball players of North Zone State. Males and females players from North Zone States were selected on the basis of multi stage randomization technique. Sample was drawn from three states like Uttar Pradesh, Delhi and Haryana. For wider applicability of results male or female players were selected from different district of the selected states through purposive random technique.

**Tools Employed:**

In the present investigation the data was collected with the help of following tools:

Stress Scale for Players by Prof. Suraksha, Dr. J.S. Bhardwaj & Smt. Anshu Sharma.
Adjustment Inventory by –Sinha and Singh

Eysenck’s Mudsley Personality Inventory by Dr. S.S. Jalota and Dr.S.D Kapoor(Adapted)

General Motor Ability Tests and measures are used in this study.

**Statistical Technique Used:**

In this study ‘t’-test of significance has been employed to compare the difference between extrovert and introvert volleyeball palyers with regard to variables stress, adjustmnet and general motor ability.

**Conclusions:**

Following conclusion were drawn out of testing the hypotheses and heir interpretation:-

Introvert volleyball players are more prone to stress than to extrovert volleyball players.

1) The introvert volleyball players exhibit more frustration than the extrovert players while playing.

2) Introvert volleyball players are more prone to ‘conflict’than to extrovert volleyball players.

3) Introvert volleyball players show more anxiety component of stress as compared to extrovert volleyball players.

4) Introvert volleyball players show more pressure component as compared to extrovert volleyball players.

Extrovert players of volleyball are better adjusted as compared to introvert volleyball players.

1) Extrovert volleyball players are better on ‘Home’adjustment as compared to introvert volleyball players.

2) Extrovert volleyball players have better 'health' adjustment as compared to introvert volleyball players.
3) Extrovert volleyball players have been found to be having good social adjustment in comparison to introvert volleyball players.

4) Extrovert volleyball players have shown better ‘Emotional’adjustment as compared to introvert volleyball players.

5) Extrovert volleyball players have been found to have good ‘Educational’adjustment in comparison to introvert volleyball players.

6) Extrovert volleyball players have performed with higher rate of speed as compared to introvert volleyball players.

7) Extrovert and introvert volleyball players do not differ significantly in their agility component of general motor ability, but extrovert volleyball players have high rate of agility as compared to introvert volleyball players.

8) Extrovert volleyball players have shown high strength of arm and shoulder as compared to introvert volleyball players.

9) Extrovert volleyball players have shown higher strength of leg as compared to introvert volleyball players.

10) Extrovert volleyball players have performed demonstrating higher rate of balance as compared to introvert volleyball players.

11) Both the type of volleyball players extrovert and introvert have shown undifferentiated muscular endurance.

12) Extrovert and introvert volleyball players both have demonstrated more or less similar consciousness for flexibility.

13) Extrovert volleyball players have been found more apt in using
'Right Hand Eye Co-ordination' against the introvert volleyball players.

1) Introvert volleyball players have come out manifesting more use of left hand eye coordination in comparison to extrovert volleyball players.

**Delimitations of the Study:**

The field of research is very wide and vast. There are numerous problems. Taking in view the limited time and resources available for the investigation the problem was delimitated to the following fields:

The study was conducted on the Volley ball players of North zone State.

The present study is confined to extraversion and introversion personality dimensions of volleyball players.

The present study is delimited to stress adjustment and general motor abilities of volleyball players.

The study is delimited to the use of four tools Stress Scale, Adjustment Inventory, Maudsley Personality Inventory and Measuring Tools and Criterian of General Motor Ability.

The size of the sample has been proposed to be 600 volleyball players on the basis of multistage randomizing technique.

The study was delimited to the Volley ball players of three States namely Uttar Pradesh, Delhi and Haryana.

This study is delimited to the best abilities and capabilities of the researcheronly.
Recommendations:

The recommendations that are being made, are based on the understanding of the nature of results on testing the hypotheses with suitable statistical test. While organizing games/sports, the following recommendations may be kept in mind for effective performance:-

(1) Periodic Diagnosis of the Psychological Status of Players

Prior to selection, periodic psychological check-up of players. They should also have periodic psychological examinations during their playing. The government should set up guidance and counseling centers to function as a 'listening-post' to players/sportsmen problems.

(II) Provision for Extension Lectures/practice

It is recommended that the government may organize extension lectures by prominent coaches at district level, college level, university level periodically.

Tournament, inter university games and cross country games should be organized during holidays and the government must provide all traveling, accommodation, food and entertainment facilities so that the players are motivated to attend. These tournaments and cross country games should also be held on rotational basis i.e. from one district to another, from one university to another and from one state to another. Such games act as an incentives to players, because these games involve social togetherness hence, promote participative spirit, cooperation, exchange culture and values among players.

(iii) Exchange Programme for Players/Sportsmen

There should be occasional exchange of players especially after the end of the tournament, inter university games and cross country games at national level, state level and district level. This will ensure uniform
standards of players over the country and will enable all players to keep abreast of their skills and thinking.

**(IV) Establishment of National Awards**

There should be appreciation and recognition of the players capabilities arising out of the players performance in relation to his game. The provision may be made for National awards for players whose performance excel in their particular game/sport in the National tournament or for other outstanding performance. Such awards boost the morale of players thereby, making other players more motivated and geared towards their skilled performance.

**(V) Provision for Employment (Incentive)**

The government should provide development incentive (employment) for players who are already in the field. A player who stops practice, stops educating, stops coaching; shows signs of professional stagnation which is harmful for future performance.

**(VI) Direct Selection**

Professionally trained players as coaches, trained instructors, yoga teachers, NIS should be appointed in different jobs or offices direct without following any recruitment process. So that more players will be internally driven to play games/sports.

**(VII) Stipend**

The government should introduce stipend schedules which would provide incentives and motivation for the improvement of game skill to retain the players within games/sports.

**(VIII) Scholarship**

Scholarships to players be provided by Govt. and such other
organization for their sustainability

(IX) Players Magazine

A “Players Professional and Magazine” should be started by the sport authority and sports associations. This will help players to know about each other, to encourage research articles, attract more participation of players in sports that shall enhance national image at the national and international level and help players to voice then grievances either individually or collectively.

(X) Professional Ethics

The professional ethics of the players should be periodically revised to incorporate the present trends. Players code of ethics should be immediately revised so that players who wish to choose sports as a profession may feel proud of this.

(XI) Stop Criticism of Players

Players tend to feel demoralized, less motivated and some times feel like leaving the team, when their performance is not encouraged rather criticized by high ranking sports officer, team manager or the chairman of the board and further convey their criticism to Minister which influence players performance and career adversely.

(XII) Selection of Players in Team

The first preference should be given in team to trained and efficient players who are already playing in the field. These players have good experience and more exposure as compared to their fresh and untrained players counterparts hence it will contribute significantly in the area of sports.

Implications:
The research in itself aims at discovering new facts or verifying the existing results of research. Research is a way in which knowledge grows and goes on to enrich the literature for its effective and practical use in the respective field of knowledge. In this context the present research will promise its relevance in the following perspective:-

**For research scholars:** Research scholars of physical education/education can use data of present study for further researches related to stress, adjustment, motor ability and personality dimensions of volleyball players belonging to North Zone State.

**For NCTE:** NCTE can be benefited by the findings of present study for developing appropriate course design for coaches/instructors as well. Findings of present study will provide guide lines in bringing changes in policy of NCTE regarding recognition of trainee institutes and physical education departments.

**For Instructor and Sport Officer:** Findings of the present study will be helpful for developing appropriate training environment in institutes. Areas of adjustment which have been pointed out in the present research will be of a great use for sports officer/officers/instructors.

**For Principal and Organizer:** Principal in the college may better organize games and sports keeping in view the findings of this research. The environment and facilities that may be provided in the college at the time of study and at the time of organising a tournament/interuniversity games/cross country games.

**For In-service training Programme:** The findings of the research
study will be helpful to policy maker and course designer in understanding the need of In-service training programes for players.

**For Providing Guidance & Counselling to the Players:**- The findings of the study can be further used for the purpose of screening of players and providing guidance & counselling to the players at the time of selection of the players in the team.

The findings of the study will be helpful to the students for regular fitness programme. This type of programme should be introduced in the school level/college level/university level through out the country.

**Suggestion for Further Research:**

The following suggestions are submitted for further research in this field:

1. The study may be conducted by taking other aspects of personality that interact with playing games.

2. Replica Studies involving later and different sets of population and follow up studies may be designed which will enable to establish the validity of the findings of the present study.

3. Cross-cultural studies can be
conducted involving third world countries or between developed and developing countries.

4. A study of stress, adjustment and motor ability of players playing other games in relation to their extraversion and introversion can be conducted.


6. The effect of physical fitness, physiological and psychological variables on the sports/games performance in various games at different levels can also be studied.

7. The study of similar nature should also be taken-up for players and non-players.