CHAPTER –V
SUMMARY CONCLUSION AND RECOMMENDATION

SUMMARY

Track & Field consists of running, hurdling, jumping, and throwing events, held between individuals and teams at indoor and outdoor meets. The running and hurdling competitions make up the track events, while the jumping and throwing contests comprise the field events. In many countries the sport as a whole is called athletics.

The uncovering of the ancient athletic site at Olympia and the knowledge gathered from various books relating to the inspiring history of the ancient games influenced the intellectual circle of the world in the 19th century. At this time, it was felt that bringing together of youth, in the spirit of ancient Olympic competitions, would not only contribute to the development of healthy youth, but also lay a foundation of peace in the world.

The poor performance of Indian track-and-field athletes at the International level has been a cause of great concern, especially to the coaches, physical educationists and sports scientists. Efforts have been made to improve the standard of our sportsmen for long, but little success has been achieved so far.

It is important to note that in contemporary India the choice of sports is determined by the child’s interest, facilities available and popularity of the sports in that particular society, but it is immaterial whether, his body structure is fulfilling the mechanical requirements of the game or not. If he chooses a wrong activity for which his body structure is not suited a limit is set beyond which, his performance cannot be improved, however, hard he and his coach may try.
However as man develops from birth to maturity some of the most observable changes in his body are those of his physical characteristics - his height, weight, shape and proportions. The patterns of growth of these characteristics result from the interaction of both inborn (genetic) and environmental factors, which are responsible for the performance of a sportsman. The physique and body composition including size, shape and form are known to play a significant role on the performance of an athlete. The performance of a sportsman in any game is also dependent on his suppleness, skill, training and motivation and on various other factor of physiological and bio-chemical nature. Age, sex and physical growth have also been noticed to influence a person’s capacity for physical activity.

Sport psychology as an applied psychology is considered as the greatest boon of the modern day sports. In a very short time, sports psychology has completed long steps. The knowledge which we have in all the field of human hard working sector, especially of behaviour has increased to such a level that we find ourselves helpless in order to discuss one’s character of behaviour with out giving the reference of others. Singer has rightly remarked that “sports psychology explores one’s behaviour in athletics”. At present, in the sports, the psychological aspects are getting more and more importance and getting the most important place in the study of psychological characteristics of time limit of performance of an individual in a high level of competition.

The best way of developing the skill of an individual in a competitive situation is working. In the game of football we find several physical challenges. We may find two players having same skill but their performances can be different due to their physical and mental response.

The negative effects of stress can be measured in different ways in and out of the lab and these measures fall into three categories: (1) Neuro-anatomical or physiological changes in the person experiencing stress, (2) the performance or behavior is dependent on those changes and by individuals (3) self-reports. The
present paper reviews the literature to date, and each region, discussed separately. In psychology, stress effects due to low performance of most theoretical accounts both with high and low level of arousal, orgasm related to the performance of the inverted U-hypothesis called for a change.

Functionalist to concentrate human and natural materials (eg, vegetation, water) for the positive feedback and development were favorable for the existence of the characteristic configuration setting is an uneducated mess. Both theories are harder than the natural environment, urban or artificial environment, they place a strong drive to different people: the art of mental fatigue while SRT is the physical stress. These principles in the high physical stimulation, complement each other and can be negative in the absence of mental fatigue stress (SRT) featuring influence. In contrast, high arousal or attentional fatigue is always negative (ART) and is not affected; attentional fatigue as a result of stress and stress increases the risk that a condition can be treated as.

Anxiety experienced during competition, known as competitive anxiety, can be defined as the feeling of apprehension an individual may experience in response to perceived threats during competition (Martens, 1977). Clearly there are situations in sport where athletes will doubt their own ability to put across a desired impression, either because of their own perceived lack of ability or due to external factors. For example, a skilled athlete who feels he needs to win to demonstrate his ability may still lose to a better competitor or because of factors beyond his control such as illness or injury. In these situations the inability to convey the desired impression may be perceived as a threat to athletes, social-identity, which may result in feelings of anxiety.

Athletes who participate in individual sports have also been found to experience more anxiety than those who play team sports. Common sense suggests that being part of a team alleviates some of the pressure experienced by those who compete alone. Finally, there is evidence that in team sports, when a team plays at
the venue of the opposition (known as an "away" game) anxiety levels tend to be higher than when playing at home.

Depression affects many different aspects of the human race is the most common disease. The depression, genetic, biochemical, environmental, or any number of different reasons stemming from psychological sources. It can be the result of what is called a chemical imbalance in the brain such as the endogenous factors, including factors. There may be a combination, a depression, personal or social problems, stressful situations, or such as assault or death of a loved family history of traumatic events. Depressive disorders result reduced mobility, an increased risk of depression may be due to pressure from the rapidly growing university students are the future of the region will be the manufacturers of depression among students at the university, according to research conducted, a deep social issues. Unfortunately leads and stress they face. Their health, safety, and sports performance can be affected at all because it is a major concern risk. In addition, the maladaptive coping behaviors and mental health than other populations conflict less likely to seek help and more likely to turn. This growing awareness is a greater understanding of personal experiences and treatments that have been suggested to be helpful in improving. University experience depressive symptoms in the population for a number of reasons to be of great concern. Important one, the typical age of onset for depression is a significant risk for a number of colleges and universities and the increasing number of reports of depression reporting appear to be on the rise in recent years group. As depression, which is the mid-twenties Iran's population is relatively young, having regard to the fact that suicidal ideations and intentions on their mental health facilities, and for prevention and treatment of diseases such authorities should pay more attention. Mental health among this generation is a necessity, identification, prevention and mental disorders and the low cost and minimal side effects with the use of appropriate methods to keep finding ways to treat. In this regard, the researcher, the right to employment of youth mental condition to alert the authorities in order for the treatment and prevention of depression and lower health care costs between the athlete and non-athlete male
Tabriz Islamic Azad University of depression among students and finally decided to compare the rate of emotional family and to prevent the loss of financial and human resources. Nowadays, more attention should be methods for the treatment of mental disorders. One of these new methods is exercise, but more research to get the best results with more accurate statistical information and knowledge needs. The relationship between depression and sports participation to achieve a more complete understanding and a critical need for more research, is not. A significant reduction of the current research in the field of IT is a combination that can be concluded Depression and sports, especially focusing on the experiences of male university students. The one The number of studies of the psychological benefits associated with participation in sports has suggested that different sources of stress that acts as a buffer against Depression affects people that is a very common mental health conditions Different ways and is much less, or may be severe and permanent. The usual Symptoms of depression include loss of interest in activities less sense, you used Feeling bad about yourself and energy reduction, to enjoy. This condition affects At some point, nearly 1 in 10 people.

The performance of man in the sports or any other area, depends on his movement-oriented behavior-all those action which can note by other or without the aid of instruments and which have their roots in the biological phenomena. We can also say that the performance of an individual is the result of the integrated and harmonious functioning of the several moving process of the body. Several environmental conditions can affect the performance of an individual in which climate, attitude, temperature, humidity are examples. There are some ‘performance variables’ which are those conditions that supposedly affect performance i.e. they may depress or elevate performance and are quite transient in nature like fatigue, warm-up superstitious behaviour, pain tolerance, over load effect.
Objectives of the study

1. The objective of this study is to acquaint the coached and trainers of athletics.
2. To make athletes understand steps for enhancement of performance in athletics.
3. To make players choosing the appropriate events of athletics.
4. To differentiate the psychological characteristics of different level runners, throwers and jumpers.
5. To differentiate the physiological characteristics of different level runners, throwers and jumpers.

STATEMENT OF THE PROBLEM:

After critically evaluating the various aspects of the study, the researcher had stated the problem as “A COMPARATIVE STUDY ON PSYCHO-PHYSIOLOGICAL CHARACTERISTICS OF DIFFERENT LEVEL ATHLETES OF INDIA”.

HYPOTHESIS:

After a painstaking review of the related literature and keeping in view the objectives of study, it is hypothesized that significant differences shall be observed in Psychological and physiological parameters of middle and long distance runners.

Selection of sample:

Three hundred fifteen subjects (105 each for Jumps, Throw and Run) for the study will be randomly selected from the Inter College, University and All India Intervarsity Athletic tournaments. Most of the subjects came from different parts of
India and were of different Socio-economic status. Before filing the questionnaire of different Psychological variables and conducted physiological tests, the research scholar will make meetings with the subject, coaches and managers of the teams. The age was limited from 18 to 25 years.

**SELECTION OF VARIABLES**

For keeping the entire study unitary and integrated, experts consultation was taken. The following *Psychological variables* were selected:-

1. Trait anxiety
2. State anxiety
3. Stress
4. Self efficacy
5. Sports Achievement Motivation
6. Depression

Following *Physiological variables* of elite Indian male middle and long distance runners.

1. Heart rate
2. Blood Pressure
3. Temperature
TOOLS

The following tools were used to collect the data on Psychological variables namely:

1. M.L. Kamlesh’s Sports Achievement Motivation Scale.
2. Spilberger’s State and Trait Anxiety Scale
3. General self efficacy scale Matthias Jerusalem and Ralf Schwarzer in 1981
4. Stress questionnaire developed by international Stress Management Association 2013
6. Stethoscope
7. Sphygmomanometer
8. Electronic thermometer

STATISTICAL PROCEDURE

Reiterating the objective of the study, we have to point out that we intend to investigate the psychological and physiological variables of different level athletes of India. Thus we shall use analysis of variance to found out the significant difference among the three types of athletes. Where the difference will significant, we will use L.S.D. test to analyses, which groups mean is greater than other. The differences in various variables of performance of different level male athletes of India will be tested at 0.05 level of Significance.
Conclusion

Analysis of data revealed following results;

1. The mean age of all India level runners are significantly greater than mean age of university runners followed by inter-collegiate level runner.
2. The mean age of inter-collegiate level throwers are significantly greater than mean age of University level throwers followed by all India level throwers.
3. The mean age of all India level jumpers is significantly greater than the mean age of university level jumpers followed by inter-collegiate level jumpers.
4. The mean trait anxiety of Inter – Collegiate level runners is significantly greater than the mean trait anxiety of University runners followed by All India level runners.
5. The mean trait anxiety of University level throwers is significantly greater than mean trait anxiety of all India throwers followed by inter-collegiate level throwers.
6. The mean trait anxiety of university level jumpers is significantly greater than inter-collegiate jumpers followed by all India level jumpers.
7. The mean state anxiety of inter – collegiate runners is significantly greater than the mean state anxiety of university runners followed by All India level runners.
8. The mean state anxiety of inter-collegiate throwers is significantly greater than the mean state anxiety of university throwers followed by all India level throwers.
9. The mean state anxiety of inter-collegiate level jumpers is significantly greater than the mean state anxiety of university jumpers followed by All India level jumpers.
10. The mean stress of inter – collegiate level runners is significantly greater than the mean stress of University runners followed by All India level runners.
11. The mean stress of university level throwers is significantly greater than the inter-collegiate throwers followed by All India level throwers.

12. The mean stress of inter-collegiate level jumpers is significantly greater than the mean stress of All India level jumpers followed by university level jumpers.

13. The mean self – efficacy of All India level runners is significantly greater than the mean self – efficacy of university level runner followed by inter-collegiate level runners.

14. The mean self – efficacy of the university level throwers is significantly greater than the mean self efficacy of All India throwers followed by and inter – collegiate level throwers.

15. The mean self – efficacy of All India level jumpers is significantly greater than then mean self efficacy of university level jumpers followed by inter-collegiate level jumpers.

16. The mean Sports Achievement Motivation of All India level runners is significantly greater than the mean sports achievement motivation of inter-collegiate level followed by University level runners.

17. The mean sports achievement motivation of inter-collegiate level throwers is significantly greater than the mean sports achievement motivation of All India throwers followed by University level throwers.

18. The mean sports achievement motivation of all India level jumpers is significantly greater than the mean sports achievement motivation of inter-collegiate jumpers followed by University level jumpers.

19. The mean depression of all India level runners is significantly greater than the mean depression of university runners followed by Inter-collegiate level runners.

20. The mean depression of all India level throwers is significantly greater than the mean depression of University throwers followed by Inter – collegiate level throwers.
21. The mean depression of inter – collegiate level jumpers is significantly greater than the mean depression of the university jumpers followed by all India level jumpers.
22. The mean heart rate of inter-collegiate level runners is significantly greater than the mean heart rate of university runners followed by all India level runners.
23. The mean heart rate of inter-collegiate level throwers is significantly greater than the mean heart rate of all India throwers followed by university level throwers.
24. The mean heart rate of all India level jumpers is significantly greater than the mean heart rate of inter-collegiate jumpers followed by university level jumpers.
25. The mean systolic blood pressure of inter-collegiate level runners is significantly greater than the mean systolic blood pressure of university runners followed by all India level runners.
26. The mean systolic blood pressure of all India level throwers is significantly greater than the mean systolic blood pressure of university throwers followed by inter-collegiate level throwers.
27. The mean systolic blood pressure of all India level jumpers is significantly greater than the mean systolic blood pressure of university level jumpers followed by inter-collegiate level jumpers.
28. The mean diastolic blood pressure of all India level runners is significantly greater than the mean diastolic blood pressure of university runners followed by inter-collegiate level runners.
29. The mean diastolic blood pressure of university level throwers is significantly greater than the mean diastolic blood pressure of inter-collegiate throwers followed by all India level throwers.
30. The mean diastolic blood pressure of university level jumpers is significantly greater than mean diastolic blood pressure of all India jumpers followed by and inter-collegiate level jumpers.
31. The mean body temperature of inter-collegiate level runners is significantly greater than the mean body temperature of all India and university level runners.

32. The mean body temperature of all India level throwers is insignificantly different than the mean body temperature of university throwers followed by inter – collegiate level throwers.

33. The mean body temperature of all India level jumpers is insignificantly different than the mean body temperature of university and inter-collegiate level jumpers.

**RECOMMENDATIONS**

On the basis of the results and their significance the scholar feel a gap which have to cover up for improvement of performance of runners, throwers and jumpers of different level athletes following recommendations were made by research scholar.

1. Similar study might be conducted with other games.

2. Along with psychological variables physiological and biomechanical variables might be taken for similar studies.

3. The Indian runners, jumpers and throwers might be compared with rest of world’s athletes.

4. During the talent selections the result of the study might help for coaches to better determination of psychological strengthens.