

**A COMPARATIVE STUDY OF AGGRESSION, NEUROTICISM,  
EXTRAVERSION AND ADJUSTMENT AMONG TRACK AND FIELD  
ATHLETES OF PUNJAB**

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## **INTRODUCTION**

The successful sportsman not only possesses the apparently ideal physique but also certain physical and psychological developed by the specific events, he is competing in different motor abilities, play decisive role in various sports disciplines. A performer who wants to excel in sports disciplines, like Athletics, has no doubt to pay full attention to the technical aspect but in addition has to pay much emphasis on developing the desired physical and psychological abilities.

Today all over the world, physical educators and coaches are facing their greatest challenge in handling problems in scientific way, that is to give their sportsmen proper and progressive guidelines based on scientific approach which lead to desired results. Sciences, both physical and psychological, have been recognized as one of the best means of underlying sportsman's performance and of helping in producing better performance.

The world of games and sports has crossed many milestones, as a result of different achievement in general and their application in the field of sports in particular scientific investigation in to performance of sports man have been playing an increasingly important role in the training of athletes in the scientific role in the training of athletes in the scientific way to attain excellence in performance in different spheres or sports.

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**Aggression**

Aggression is meant “the act of attacking without provocation, beginning a quarrel or war”, struggle for supremacy, dominance and excellence in sports obviously involves aggression essential in sports activities. When hostility takes over aggression the situation becomes alarming and it becomes an anti-social behaviour .Players have to be aggressive due to the nature of game i. e. in contact games aggression is more shown than non contact games. Psychologist design aggression as “any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment” Aggression is desirable behaviour in sports games for maximum performance because it arouses the athlete to put in harder effort for the success of the team .Legitimate and appropriate aggression is use full to obtain optimal performance behind that aggressive behaviour does not only retard performance but it also creates socio –psychological problem for them as well as for the society at large

Aggression in sports has become all too common. We see it among the spectators on the benches, and most commonly among the players on the field. Bench-clearing drawls, brush back pitches, moats and electric fences surrounding soccer fields, citywide riots during post-contest celebrations, stalkers preying on star athletes are some of the common examples of aggression in modern sports.

Aggression is physical or verbal behaviour; it is not an attitude or emotion. Aggression involves harm or injury, which may be either physical or psychological (e.g., we would all agree that hitting someone with a baseball bat is an aggressive act, but so too is purposely embarrassing someone or saying something hurtful). Aggression is directed towards another living thing. Punching someone is certainly aggressive, as is slapping a cat who scratches your new chair. But throwing your helmet in disgust after striking out in softball while in bad taste is not aggressive. Finally, aggression is intentional. Accidental harm, even unintentionally shooting someone, is not aggressive because you did not intend to do harm.

**Neuroticism**

Neuroticism, also known as Emotional Stability is not a personality disorder, but rather one of the facets of normal personality. Every person is a unique individual (even the most conforming of us is a unique individual). Most people use the term "personality" to describe the ways that people are different from one another. Psychologists also use another term that has roughly the same meaning as personality: "individual differences". Psychologists have spent over a hundred years trying to understand how to best model and explain individual differences; the different parts of human nature that make people different from one another.

Temperament is the part of personality that is inherited, or at least which seems to be biologically manifest and which is present at birth. A person's ultimate personality results from temperament (which is each person's starting place), and how temperament gets modified by experience as each person lives their lives. Most psychologists today support (with some minor disagreements here and there) what is known as the five factor model of normal personality. The five factor model, variously formulated by Lew Goldberg, and Costa and McCrae among others, suggests that normal personality is best divided into five more or less independent components. That there are five components is a somewhat arbitrary number. There are many models where the five major components are themselves subdivided into smaller parts. It really comes down to where you want to draw lines. But the behaviors characterized by the five factors are almost always identified as important by independent psychologists studying the problem. So, the consensus is that it

### **Extraversion**

Extraversion is “the act, state, or habit of being predominantly concerned with and obtaining gratification from what is outside the self”. Extraverts tend to enjoy human interactions and are generally enthusiastic, talkative, assertive, and gregarious in social situations. They take pleasure in activities that involve large social gatherings such as: parties, community activities, public demonstrations, business, and political groups. Politics, teaching, sales, managing and brokering are fields that favour extraversion. An extraverted person enjoys and becomes energized by larger groups of people while time alone is less enjoyable and boring to them. Extraverts aren't necessarily unintelligent or uncaring but tend to speak or act before putting much thought into what they do; not entirely realizing the lasting effects of their decisions. Extraversion and introversion are typically viewed as a single continuum. Thus, to be high on one is necessarily to be low on the other. Carl Jung and the authors of the Myers-Briggs provide a different perspective and suggest that everyone has both an extraverted side and an introverted side, with one being more dominant than the other. In any case, people fluctuate in their behavior all the time, and even extreme introverts and extraverts do not always act according to their type.

### **Adjustment**

The dictionary meaning of the word 'adjustment' is, to make suitable, adapt, arrange, modify, harmonize or make correspondent. According to Darwin's (1859) theory of evolution, those species which adapted successfully to the demands of living, survived and multiplied while others who did not died out. Therefore, the adaptation or changing of or one's surroundings according to the demands of the external environment became the basic need for our survival

It is as true today with all of us as it was with the Darwin's primitive species. Those of us who can adapt or adjust to the needs of changing conditions can live happily and successfully, while others either vanish, lead miserable lives or prove a nuisance to society. However, the concept of adjustment is not so simple as adaptation. Psychologists and scholars differ considerably in interpreting its meaning and nature as can be seen from the following definitions; Adjustment is the establishment of a satisfactory relationship a representing harmony, conformance, adaptation or the like. Carter V Good (/959): Adjustment is the process of finding and adopting modes of behavior suitable to the environment or The change in the environment. Warren (1934): Adjustment relates to any operation an organism undergoes which becomes more favorably related to (the environment) than to the entire outer environmental and internal Shaffer (1961): Adjustment the process by which a living organism maintains a balance between its need) and the circumstances that influence the satisfaction of these need. Adjustment stands for the state of one's maturity in personality. It is not feasible to classify adjustment as good or bad but there is continuum from the most to the least effective one's. To be free from inner conflicts i.e. integration, ego involvement, constructive philosophy of life, acceptance of reality, reasonable, enthusiasm, emotional maturity, adequate school relationship, adaptability and goal setting according to ability are characteristics of a properly adjusted person as absorbed.

The term 'Adjustment' has been defined in many ways by different learned persons:-Maslow and Middleman (1951), "Adjustment of a person may be defined as a characteristic way in which he perceives, reacts to and solves the main problems of life". James Dreyer (1952), "Adjustment means modification to compensate for or meet special conditions". By adjustment is meant the arranging, compromising and harmonising of differences, conflicts and decisions which must be made in everyday life; the regulation or systematisation of elements of our behavior in relation of larger components of existence. Crow and Crow (1956), "An individual's adjustment is adequate, wholesome to the extent that he has established harmonious relationship between himself and the conditions, situations and persons who comprise this physical and social environment." C.V. Good (1959), "Adjustment is the process of finding and adopting modes of behavior suitable to environment or to the changes in the environment." L.S. Shaffer (1961), "Adjustment is the process by which living organism maintain a balance between its need and the circumstances that influence the satisfaction of these needs. Lazararus (1961), "Adjustment consists of psychological processes by means of which an individual manages or copes with various demands or pressures". Gates and Jersild (1970), "Adjustment is a continual process by which a person

varies his behavior to produce more harmonious relationship between himself and his environment". Eysenck (1972), "Adjustment is a state by which the needs of the individual on the one hand and the claims of environment on the other are fully satisfied or the process by which this harmonious relationship can be attained." Haller (1975),"Adjustment involves a four way relationship, interpersonal, person to person, person to group and person to object." Worchel and Goethals (1985), "The process of adjustment involves knowing yourself, coping with the stress of everyday life, understanding other and being aware of the influence of the environment on social behavior." Kaplan and Stein (1984), "The process of adjustment involves a person's attempt to cope with, master and transcend the challenges of life by utilizing a variety of techniques of strategies". Boring and Lang and Weld "Adjustment is the balance between its needs and circumstances that influence the satisfaction of their need."

### **STATEMENT OF THE PROBLEM**

"A comparative study of aggression, neuroticism, extraversion and adjustment among track and field athletes of Punjab"

### **OBJECTIVES OF THE STUDY**

1. To find out the aggression level between track athletes and jumpers.
2. To find out the aggression level between track athletes and throwers.
3. To find out the aggression level between jumpers and throwers.
4. To find out the neuroticism level between track athletes and jumpers.
5. To find out the neuroticism level between track athletes and throwers.
6. To find out the neuroticism level between jumpers and throwers.
7. To find out the extraversion level between track athletes and jumpers.
8. To find out the extraversion level between track athletes and throwers.
9. To find out the extraversion level between jumpers and throwers.
10. To find out the adjustment level between track athletes and jumpers.
11. To find out the adjustment level between track athletes and throwers.
12. To find out the adjustment level between jumpers and throwers.

### **HYPOTHESES**

1. There will be no significant difference in aggression level between track athletes and jumpers.
2. There will be no significant difference in aggression level between track athletes and throwers.
3. There will be no significant difference in aggression level between jumpers and

throwers.

4. There will be no significant difference in neuroticism level between track athletes and jumpers.
5. There will be no significant difference in neuroticism level between track athletes and throwers.
6. There will be no significant difference in neuroticism level between jumpers and throwers.
7. There will be no significant difference in extraversion level between track athletes and jumpers.
8. There will be no significant difference in extraversion level between track athletes and throwers.
9. There will be no significant difference in extraversion level between jumpers and throwers.
10. There will be no significant difference in adjustment level between track athletes and jumpers.
11. There will be no significant difference in adjustment level between track athletes and throwers.
12. There will be no significant difference in adjustment level between jumpers and throwers.

### **LIMITATIONS OF THE STUDY**

1. Certain factors like attitude, interest, life style, habits etc. were not under the control of the investigator and were considered as limitations of the study.
2. Aggression, neuroticism, extraversion and adjustment are known as abstract effective qualities. The ability of the existing instruments of measure them with precision may not be very satisfactory and were recognized as the limitation of the study.

### **DEFINITION OF TECHNICAL TERMS**

#### **Aggression**

Aggression or aggressive behaviour is a term that is used extensively in sports. "Aggressive behaviour is an unprovoked hostility"

#### **Neuroticism**

"Neuroticism is a state characterized by emotional instability, anxiety and low self respect. Neuroticism should not be identified with neurosis, since neurotic symptoms may be shown by healthy individuals too. Neuroticism is generally assessed by special scales or personality inventories"

**Extraversion**

"Turning outward. Used primarily in personality theory to refer to the tendency to direct one's energies outward, to be concerned with and derive gratification from the physical and social environment".

**Adjustment**

"Adjustment is a function of the efficiency with which an individual generate positive rewards and punishments".

**SIGNIFICANCE OF THE STUDY**

1. The results of the study will help in finding out the aggression level of male track athletes, jumpers and throwers.
2. The study will help in finding the neuroticism among male track athletes, jumpers and throwers.
3. With the help of this study, the coaches will be able to find out the extraversion among male track athletes, jumpers and throwers.
4. The study will help in finding the adjustment level of male track athletes, jumpers and throwers.

**RESEARCH DESIGN**

This study was a survey type research where the data was collected through the psychological questionnaires. The data for the aggression was collected through Aggression questionnaire by Dr. G.C. Pati in Hindi version. The Neuroticism and Extraversion, as the factors of the personality, were measured through the data collection by mean of Maudsley Personality Inventory (MPI) and the data for Adjustment factor was collected through Bell Adjustment Inventory.

**(i) Sample:**

In the present study, the investigator used stratified random sampling technique for selecting various groups of samples.

A total sample of 240 athletes was taken for the study out of which 80 were track athletes, 80 were jumpers and 80 were throwers. These players were of the age group of 17-24 years and had participated atleast in inter-collegiate or state championship of Punjab. Only male athletes were subject for the present study. These athletes were from the following districts under Kurukshetra University, Kurukshetra and Maharishi Dayanand University, Rohtak:

Jind – 16 for each group

Hisar – 16 for each group

Bhiwani – 16 for each group

Rohtak – 16 for each group

Sonepat – 16 for each group

### **(ii) Variables**

Keeping in view the educational importance and performance in sports, following variables were selected for this study:

1. Aggression
2. Neuroticism
3. Extraversion
4. Adjustment
  - a) Home Adjustment
  - b) Health adjustment
  - c) Social adjustment
  - d) Emotional adjustment

### **(iii) Tools used**

The selection of tools was governed by the consideration of their (i) availability (ii) suitability to the sample (iii) reliability and validity. Keeping in view these considerations, following tests were used for data collection.

Aggression questionnaire by Dr. G.C. Pati in Hindi version have been used for measuring aggressive behavior.

To measure extraversion and neuroticism, the Hindi version of Eysenck's Maudsley Personality Inventory (MPI), prepared and standardized by S.S. Jalota and S.D. Kapoor were taken. The reliability for the extraversion and neuroticism is 0.71 and 0.42 respectively. There are 48 test items in MPI. These are yes/no items.

Bell adjustment Inventory (1904) by S.M. Mohsin (Hindi Version) was used to measure home, health, social and emotional adjustment. It is one of the most widely used personality inventories developed by H.M. Bell in 1934. It is adopted in Hindi by Mohsin-Shamshad. It has 124 items and measures adjustment in four areas home, health, social and emotional-separately and provides a reliable score of overall adjustment. The reliability of the inventory is 0.932 and validity is 0.785.

### **(iv) Collection of Data:**

“Scientific problems can be resolved only on the basis of data, available or collected and a major responsibility of the scientist is to set up a research design capable of providing the necessary data for the solution of his problem” (Mouly 1964). Factual material or data

unknown or untapped so far is essential in every study. It can be obtained from many sources, direct or indirect. It is necessary to adopt or evolve a systematic procedure to collect essential facts.

In order to collect the requisite data for any research problem in social sciences, the investigator has to select a sample of the population concerned since it is not possible to sample the entire population and to decide appropriate tools to measure the attributes concerned and finally to administer tools on the sample selected. The major task before the investigator in the present study was to administer the tools on the subjects in a homely manner as possible with a view to get objective and true responses, therefore investigator first established personal contacts with athletes and achieved a certain degree of rapport with them.

#### **Administration of Tests:**

After selecting the sample of the study and before conducting the tests, the purpose of testing and technique to be employed in the study were told to the subjects and all possible doubts were cleared. They were assured that the information obtained through the scales would be kept confidential. It would not harm them in any case. Therefore, they were urged to feel free and reply every question frankly and sincerely. The subjects showed enthusiasm and promise to give wholehearted cooperation. In this study questionnaire method was used. Every questionnaire was administered to all subjects under the direct supervision of the investigator. The questionnaires were administered in accordance with the instructions laid down in the manual. While administering the questionnaires, the subjects were assembled at their places of competition. All tests were administered one after the other separately with the help of leader, coaches and managers of the respective teams.

#### **Scoring:**

The investigator studied all the instructions from the manuals of the tests to understand the scoring technique. In case of scoring of G.C. Pati's Aggression Questionnaire, it consists of 16 questions. Each question described a situation where some form of aggression or deviant behavior has occurred and also some persons who have responded to that in low to mildly aggressive, moderately aggressive and highly aggressive manners. The subjects were requested to indicate the best appropriate response out of the given there responses elicited by the situation from person described in the question. The question admit three possible replies indicating low to mild aggressive, moderate aggressive and high aggressive trends. These may be easily scored as 1, 2 and 3. The distances between 1 and 2 as well as 2 and 3 are mathematically equal. This equality should be expected in the distance between low to mildly

aggressive and moderately aggressive and between moderately aggressive and highly aggressive trends, for these to be scored as 1, 2 and 3. But the idea of equal distance between them may not be tenable. The theoretical propositions indicate a greater distance between moderate aggression and highly aggression than between low-mild aggression and moderate aggression. Therefore, scoring the alternatives as 1, 2 and 3 is not used. And “Sigma deviate weighting method” as formulated by Likert used by this method a scoring schedule is prepared to score individual performance.

In Maudsley personality inventory, there are 48 statements, out of which 24 items measure extroversion and 24 neuroticism. If a “Yes” or a “No” response has been correctly encircled then two marks were awarded for each correct response. If a “?” has been correctly encircled then one mark was given. Mohsin has prepared Bell Adjustment Inventory in Hindi version and it has 124 items to measure 4 dimensions of adjustment viz. Home (32), health (28), social (31) and emotional (33). The respondents were given all the instructions as laid down in the test manual to fill up their responses. The inventory is scored simply by counting the number of responses marked correctly in each area of adjustment. Each response has to be given (a score of one) High score indicates poor adjustment. The sum of scores in different areas gives measure of total adjustment.

#### **(v) Statistical Techniques Used**

After collecting the raw data, the data were tabulated and converted into standard score for subjects separately. Then the mean score and standard deviation for different variables were calculated separately. The mean, standard deviation and t-ratio were used to study the difference between aggression, neuroticism, extraversion and adjustment of track athlete jumpers & throwers significance was 0.05.

### **MAIN FINDINGS**

According to the objectives and the hypothesis stated earlier in the present study, the results have been presented as follow:

1. There is no significant difference between the track athletes and Jumpers on level of Aggression.
2. There is significant difference between track athletes and throwers on aggression. Throwers have more aggression than track athletes.
3. There is no significant difference between jumpers and throwers on aggression.
4. There is no significant difference between track athletes and jumpers on neuroticism.
5. There is a significant difference between track athletes and throwers on neuroticism.

Track Athletes are more neurotic than throwers.

6. There is no significant difference between jumpers and throwers on neuroticism.
7. There is no significant difference between track Athletes and jumpers on extraversion.
8. There is significant difference between track athletes and throwers on extraversion.  
Throwers are more extraverts than track athletes.
9. There is no significant difference between jumpers and throwers on extraversion.
10. There is no significant difference between track athletes and jumpers on home, health, social, emotional and total adjustment.
11. There is no significant difference between track athletes and throwers on home, health, social, emotional and total adjustment.
12. There is no significant difference between jumpers and throwers on home, health, social, emotional and total adjustment.

## **DISCUSSION OF HYPOTHESES**

1. It was hypothesized that there will be no significant difference in aggression level between track athletes and jumpers. The result of the study shows that there exists no significant difference between track athletes and jumpers on aggression. Hence, the hypothesis is accepted.
2. It was hypothesized that there will be no significant difference in aggression level between track athletes and throwers. The result of the study shows that there is significant difference between track athletes and throwers on aggression. Hence, the hypothesis is rejected.
3. It was hypothesized that there will be no significant difference in aggression level between jumpers and throwers. The result of the study shows that there is no significant difference between jumpers and throwers on aggression. Hence, the hypothesis is accepted.
4. It was hypothesized that there will be no significant difference in neuroticism level between track athletes and jumpers. The result of the study shows that there is no significant difference between track athletes and jumpers on neuroticism. Hence, the hypothesis is accepted.
5. It was hypothesized that there will be no significant difference in neuroticism level between track athletes and throwers. The result of the study shows that there is significant difference between track athletes and throwers on neuroticism. Hence, the hypothesis is rejected.

6. It was hypothesized that there will be no significant difference in neuroticism level between jumpers and throwers. The result of the study shows that there is no significant difference between jumpers and throwers on neuroticism. Hence, the hypothesis is accepted.
7. It was hypothesized that there will be no significant difference in extraversion level between track athletes and jumpers. The result of the study shows that there is no significant difference between track athletes and jumpers on extraversion. Hence, the hypothesis is accepted.
8. It was hypothesized that there will be no significant difference in extraversion level between track athletes and throwers. The result of the study shows that there is significant difference between track athletes and throwers on extraversion. Hence, the hypothesis is rejected.
9. It was hypothesized that there will be no significant difference in extraversion level between jumpers and throwers. The result of the study shows that there is no significant difference between jumpers and throwers on extraversion. Hence, the hypothesis is accepted.
10. It was hypothesized that there will be no significant difference in adjustment level between track athletes and jumpers. The result of the study shows that there is no significant difference between track athletes and jumpers on home, health, social, emotional and total adjustment. Hence, the hypothesis is accepted.
11. It was hypothesized that there will be no significant difference in adjustment level between track athletes and throwers. The result of the study shows that there is no significant difference between track athletes and throwers on home, health, social, emotional and total adjustment. Hence, the hypothesis is accepted.
12. It was hypothesized that there will be no significant difference in adjustment level between jumpers and throwers. The result of the study shows that there is no significant difference between jumpers and throwers on adjustment. Hence, the hypothesis is accepted.

## **CONCLUSION**

On the basis of results of the present study, we can conclude that throwers are more aggressive and extravert than track athletes. Track Athletes are more neurotic than Throwers. However, there is no significant difference between track athletes and jumpers on aggression, neuroticism, extraversion level. Similarly, there is also no significant difference between

jumpers and throwers on aggression, neuroticism, extraversion level. There is no significant difference between track athletes and jumpers, track athletes and throwers, jumpers and throwers on home, health, social, emotional and total adjustment.

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