CHAPTER-II

REVIEW OF RELATED LITERATURE

Literature means writings and a body of literature refers to all the published writings in a particular style on a particular subject. In research, a body of literature is a collection of published information and data relevant to a research question. A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to particular topic. For conducting any piece of research study, review and survey of literature related to the study being conducted, is of paramount, significance. Surveying of researches conducted in the field helps the investigator in understanding the problem from different perspectives. Such a review of the studies conducted by the other investigators in the field related to the problem in hand also helps the researcher in framing the objectives and the correspondence hypothesis of the study. However, the most significant contribution of such surveys helps the investigator in interpretation of the result of the study that the researcher investigates.

With the above objectives in view the investigator proposes to survey the literature related with the present study.

Before and during competition, the sportsmen are large fearful so some degree with eventful their performance. This is a nature phenomenon. No human being is free from anxiety. In the stressful setting provided by competitive sports; it is usual to observe to a rational appraisal of a real threatening situation and the team anxiety denotes an abnormal apprehension of such a situation.
In this study, the different aspect of the volleyball players for their selected Neuroticism, Extroversion and Lie Scale variables has been studied. For the purpose of this study some of the related literature has been collected which will help the researcher for his study.

**In this chapter the study related to the problem selected are given below:**

**Ackerman P L (2011)** studied resent research has provide evidence for the predicative validity of personality traits in academic settings, the path to an improved understanding of the nature of personality influences on academic achievement involves a re-conceptualization of both criterion and predictor construct spaces. For the criterion space, one need to consider student behaviors beyond grades and level of educational attainment, and include with the student does among other things outside of the classroom. For the predictor space, it possible to bring some order to the myriad personality constructs that has been developed over the last century, by focusing on common variance among personality and other non-ability traits.

**Methods.** We review these conceptual issues and several empirical studies. [Ackerman: 2011:11-37]

**According to Alderman (1974)** “Eysenck’s view can be interpreted as indicating that extraverts are low on excitation and high on inhibition, which introverts being the opposite. Athletes, then, would react quite differently to a rise in arousal level from competitive circumstances depending on whether or not they are mainly extraverts or introverts. For example, an athlete, high on extraversion would have more trouble "getting up" for a game than one high on introversion, but would be better able to handle and channel arousal later in the game because of strong inhibitory mechanism". The dominance trait appears to
be one of the important personality traits of sportsmen which have two interesting implications for sports performance, e.g.

(1) Eysenck expects extraverts to have low tolerances for sensory deprivation and higher tolerances for physical pain because they have higher thresholds of arousal. It explains why athletes are, in fact, highly physically active and relatively tolerant of physical pain, which is required in many endurance events and in the hard physical training programmes required for skill perfection.

(2) It is generally accepted that an optimal level of arousal, stimulation, or activation, exists in each person where his performance is maximal. It is usually represented by an inverted U-curve relationship which shows that a person's level of arousal increases, performance increases up to an optimal point, after which further increases in level of arousal result in a deterioration of performance. [Alderman: 1974:212-231]

Andrich and Luo (1993) another major focus in psychometrics has been on personality testing. There have been a range of theoretical approaches to conceptualizing and measuring personality. Some of the better known instruments include the Minnesota Multiphasic Personality Inventory, the Five-Factor Model (or “Big 5”) and tools such as PAPI and Myers-Briggs Type Indicator. Attitudes have also been study extensively in psychometrics. A common approach to the measurement of attitude in the use of the Likert scale. An alternative approach involves the application of unfolding measurement models, the most general being the Hyperbolic Cosine Model.[Andrich&Luo: 1993:253-276]

Arno F. Wittig, K. Terry Schurr (1994) relatively few studies have used standardized psychological instruments to describe personality characteristics of intercollegiate athletes. Using members of
intercollegiate teams from two Midwestern conferences as subjects, this study investigated relationship of the four psychological factors underlying the Million Behavioral Health Inventory with success of team, conference affiliation, occurrence of athletic injury, and, for players who had injuries, adherence to rehabilitation plans, the factor describing an assertive, self-assured, independent attitude distinguished one conference from the other, had higher values for successful than for unsuccessful teams, and was associated with higher injury rates. For players suffering moderate or severe injuries, this factor was also associated with adherence to rehabilitation plans. The relationship of this factor with the several variables is explained as resulting from risk taking and positive deviance. [Arno, Wittig & Terry: 1994:322-330]

**Bale and McNaught (1983)** were less endomorphic than a group of female New Zealand Hockey Players somatotyped by Johnston and Watson using the Parnell M4 method. The halfbacks and forwards tended to be lighter and less endomorphic than the backs and goalkeepers.

They had the lowest percent fats but they had highest step scores for cardiovascular fitness, the highest vital capacities and the highest explosive strength scores. Discriminant analysis between the defensive players (backs and goalkeepers) and attackers (halfbacks and forwards) indicated significant difference between these groups in endomorphs, total skinfolds, and absolute fat and step test scores. The findings Bale and McNaught- Davis however, did not support those of Jonson and Watson that a high mesomorphs rating is an important characteristic of attack player in women Hockey but they do suggest that, like men Hockey players, women who play in attack positions are simmer and

**Bawa, Gurdial Singh and Debnath Kalpana (1989)** studied the personality traits of Indian national women football and gymnastic team. They found a significant difference in six of the personality traits between the two teams. Female gymnasts were found to be significantly more intelligent, more controlled, having higher self concept control where as the national footballs team was found more suspicious, more apprehensive and moody and more self sufficient than gymnastic team. [Bawa and Debate: 1989:25-30]

**Bawa G S and Monika Debnath (1989)** studied the personality traits of female national badminton players, gymnasts and cyclists. All the three groups were found to be an average category on introversion extraversion scale. But when the mean scores were compared the badminton players were found significantly more introverts that other two groups. [Bawa and Monika: 1989:199-215]

**Barrow and Rosemary (1979)** have emphasized “the importance of balance and ability in various sports activity and their physiological mechanism. They have opinioned that balance is an important aspect of efficient motor response and is one of the basic motor factors. It is the ability of an individual to maintain his neuromuscular system in static condition for an efficient response on training control it in a specific efficient posture while it is moving. The first type of balance is static and the other is dynamic. Both are basic to movement under varying conditions. Both indicates a certain amount of steadiness and stability and characterized a certain amount of case and poise in maintaining position. [Barrow and Rosemary: 1979:118-119]
Behrman M. Robert (1967) Conducted study on personality differences between non-swimmers and swimmers. The investigation was made to determine whether there are personality difference between male college freshmen swimmers & non-swimmers and to determine the relationship between personality traits and swimmers experiencing a common course of instruction in swimming. Subjects were compared on the basis of swimming performances, personality test, biographical data forms, and interviews with subjects who failed to learn how to swim comparison revealed significant differences between swimmers and non-swimmers and between learners and no learners. The data indicated a need to investigate methods of teaching fearful non-swimmers based on indication of pertinent personality traits, fears and experiences in the water. [Behrman: 1967:163-71]

Bhanot and L.S. Sidhu (1983) studied by anaerobic power in relation to field position of 90 Indian Hockey players. These players included 10 goalkeepers, 16 backs, 20 half-backs and 44 forwards. The goalkeepers possess maximum and forwards possess minimum anaerobic power while in vertical velocity, the former are the fastest and the latter are the slowest. In body weight, the backs are heaviest followed by half backs, goal keepers and forwards. Among backs, the lefts are heavier, faster and have more anaerobic power than rights. In half-line players, the center-half backs are followed by left-half-backs and right-half-backs both in body weight and anaerobic power, while in vertical velocity, the left-half-backs are the fastest and center-half-backs are the slowest. Among forwards, the center-forwards are heaviest with maximum anaerobic power and are followed by inside-forwards and outside-forwards, whereas, in vertical velocity, the inside-forwards are
fastest followed by center- forwards and outside-forwards. [Bhanot and Sidhu: 1983:34-9]

**Bhushan and Agarwa, V. (1978)** conducted study to evaluate personality characteristics of high and low achievement Indian sports persons. They administered the cattell, S 16p F. Questionnaire to ten high achievement players who had represented India at international level and ten persons who had never achieved any distinction in their respective games. [Bhushan and Agarwa: 1978:191-198]

**Booth (1958)** using MMPI investigated the differences in the personality of football players, athletics and non-athletics. His result revealed that the athletics from various sports groups and non-athletics differed significantly on several of the MMPI scale. [Booth: 1958:127-38]

**Burke (1972)**examined the effect of stimulus condition and direction on reaction time and movement time of closed and open skill athletes. The stimulus condition was simple as well as complex. The direction of movement were to the front, the left, the right and to the near. 42 closed athletes were gymnasts, cross country runners and swimmers, while the 42 open athletes were soccer, baseball and basketball players. A significant interaction was achieved, between the stimulus condition and direction. And the following conclusions were made.

I. Reaction time and movement time measures were faster under complex stimulus conditions.

II. The open skill athletes had faster reaction time movement time measures than the closed skill athletes. [Burke: 1972:224-9]

**Cattell Raymond B (1956)** He was rigorously devoted to the scientific method. He was an early proponent of using factor analytical
methods instead of what he called “verbal theorizing” to explore the basic dimensions of personality, motivation, and cognitive abilities. One of the most important results of Cattell’s application of factor analysis was his discovery of 16 factors underlying human personality. He called these factors “source traits” because he believed they provide the underlying source for the surface behaviors we think of as personality. This theory of personality factors and the instrument used to measure them are known respectively as the 16 personality factor model and the 16PF Questionnaire.

Cattell’s best-known accomplishments were in personality, intelligence, and innovative research statistics. In personality, he is best remembered for his factor-analytically derived 16-factor model of personality, arguing for this over Eysenck’s simpler 3-factor model, and developing tests to measure his primary factors in the form of the 16PF Questionnaire. He was the first to propose a hierarchical, multi-level model of personality with basic primary factors at the first the level plus the broader, “second-order”, or global traits, of personality at a higher level of personality organization (Cattell, 1943). These five global traits are the precursors of the current, widely used Big Five model of personality. His research led to further advances, such as distinguishing between state and trait measurement of personality. He helped to distinguish between immediate, transitory personality states long-term, enduring tendencies for various traits of personality, such as anxiety.

[Cattell: 1956:205-14]

Cattell (1965) disagreed with Eysenck’s view that personality could be understood by looking at only three dimensions of behavior. Instead he argued that it was necessary to look at a much larger number of traits in order to get a complete picture of someone’s personality. Like
Eysenck, Cattell used the mathematical technique of factor analysis to look at which types of behavior tended to be grouped together in the same people. He identified sixteen personality factors. Cattell produced a personality test similar to the EPI that measured each of the sixteen traits. The 16PF (as it is called) has 160 questions in total, 10 questions relating to each personality factor. [Cattell: 1965:1-64]

**Clanney, Byron Nelson Mc (1969)** Divided college men into high fitness groups on the basis of 'APHER' youth fitness test battery. While comparing their psychological personality characteristics, as measured by cattle's 16 pf questionnaire, self concept and academic aptitudes, be concluded that high fitness group appeared to be more group dependent while low fitness groups were more self sufficient. Also the subject in high fitness group appeared to be more trusting and free of jealousy where as the low fitness group appeared to be more auspicious and self opinionated, psychological personality characteristics by cattle’s 19 pf questionnaire. [Clanney&Byron: 1969:1423-A]

**Clair (1960)** divided 100 male students in 2 groups of 50 each athletes and non-athletes. The athletes consisted of 10 each basketball, gymnastic baseball, football players, lines men and football back 25 tests were administered to each subjects. The findings indicated that performance and agility test were accounted for the part, by reaction time, speed or movement, strength balance, change of direction and body size and from a significant difference was found between the mean scores of the various group of athletes. [Clair: 1960:44]

**Jung C.G. (1939)** Carl Jung’s theories are based on how one takes in information or perceive thinks and how one makes decision within these basic functions are opposite. One can perceive through either sense or through intuition and one can make decisions using logic
or feelings Katherine Briggs and her Isabel Briggs Myers furthered Jung’s theories. Today’s modern theories of personality include four major opposing pairs of personality characteristics which represent eight ways of processing information, introverts and extroverts, initiative and sensitive, thinking and feeling and judging perceiving. [Jung: 1939:7-12]

Clark Peter T (1987) studied the personality and attitudinal profiles of 250 applicants to sports related courses. He reported that successful group scored significantly higher than the successful group in the sub domain of vertigo and females where significantly higher in the domain of athletic. [Clark: 1987: 33-58]

Davidson M A et al (March 1957) Davidson et al. investigated body built and temperament in group of 100, seven year old children, found symptoms of anxiety and emotional unrest associated with ectomorph. They also found a relationship between ectomorph and meticulous, fussy and conscientious traits of personality. In general the correlations between some to type and psychological attributes were of low order. [Davidson: 1957:48-61]

David H. Hunt (Dec. 1969) designed to investigate the difference in personality factor with athletes and non athletes with white athletes and Negroes. He said garden personality profiles as a criterion measures and total of III subjects were divided into 4 groups based upon their ethnic background and athletic ability. The result suggested that the varsity athletes were significantly differently and were ranked higher in ascendance responsibility and emotional stability, traits when compared to Negro non athletes and white non athletes. They also suggested that Negro varsity athletes were significantly differently and were ranked higher in responsibility when compared to Negro non athletes. No significant difference was measured when white varsity athletes V/s
Negroes varsity athletes. Negro varsity athletes and Negro non athletes V/s non athletes were compared. [David: 1969:185-195]

**Davis and Mogk (1994)** reported that elite athletes could be distinguished from other groups on Extraversion, Neuroticism, Tough-mindedness (Psychoticism). However, they have reported that recreational sports enthusiasts had higher scores than any other groups on psychoticism scale and they were the only groups which has higher extraversion scores than non athletes.[Davis and Mogk: 1994:131-143]

**Dorothy V. Harris (1964)** compared high and low fitness college women in psychological traits and found that there is a tendency for the, fit individual to appear more stable in certain psychological traits and to appear less anxious in other. [Dorothy: 1964:1351-58]

**Dorothy R Mohr and M Haverstic (1956)** studied 102 women students at the University of Maryland enrolled in eight week volleyball courses who were given repeated volleys test at 3ft. And 7ft. restraining lines. This height was measured and they were given tests for agility and vertical jumping. Correlations were computed between volleys test and other factors. From a study of these correlations and the significance of the differences a significant relationship was found to exist between jumping and volleying at the 3ft. distance. [Dorothey and Mrtha: 1956:74]

**Dureha D.K. (1987)** Concluded that the sports men and non sports men differed in their personality.characteristic in some factors. Like emotional stability and realism about life, cheerfulness and frankness, tender mindedness and practicability and great control over emotions and greater regards for self respect and social reputation. [Dureha: 1987:26-30]
Earl. R Jones (1973) conducted a theory on effect of anxiety and need achievements of the performance of high school wrestlers. Data were obtained by the thematic appreciation test. The anxiety questionnaires, expectancy ratings by the individuals and by their coaches performance data were obtained from match as cores boards and observation. It was concluded that the personality traits of anxiety and need for achievement had tendency to influence both the expectancy and the actual performances of the high school wrestlers subjects who measured low in anxiety level performed better than those high need in anxiety. The group scoring highest in performance was that of low anxiety and high need for achievement, the lowest level of performance was demonstrated by the group high in anxiety and low in need for achievement.[Earl: 1973: 1]

Evans & Quaterman (1983) found that the female basketball player (successful & unsuccessful) scored significantly lower then the non-athlete female group. Towards the tough-minded side of the scale on factor L the unsuccessful groups of basketball players are more training. [Evans and Quaterman: 1983:105-115]

Eysenck (1952) initially proposed that personality could be completely described by just two traits: extroversion and neuroticism. Extroversion describes how lively, sociable and impulsive a person is, while neuroticism describes how emotionally stable they are. One question you might ask is why three different characteristics like liveliness, sociability and impulsivity are grouped together as one trait. [Eysenck: 1952:372-374]

Eysenck H J & Nias D N (1982) the answer is that, through a mathematical process called factor analysis; Eysenck discovered that in most cases it is the same people who tend to be lively, impulsive and
sociable. When characteristic behaviors tend to go together in this way, we can say that they make up one trait. Extroversion and Neuroticism can be measured by a personality test called the Eysenck Personality Inventory (EPI). Sports dominated countries like Russia, America, China, and Germany have developed the new experiments in the field of sports psychology. Russians have been taken most and major role to develop this branch of psychology. Eysenck et al (1982) reported that athletes tend to be high on psychoticism than the non-athletes. According to them, a high psychoticism sores may be described as being aggressive, troublesome, cruel and inhuman, lacking in feeling and sympathy. [Eysenck&Nias: 1982:1-56]

Eysenck (1947) extraversion is at best a behavioral description of personality, but that it does possess biological causal source implication. He believes that extraversion can be explained at the neural level in that his extraversion-introversion scale reflects the strength of the excitatory-inhibitory functions of the central (cortical) nervous system. He (1967) also proposed that the extraversion associated reticular-cortical loop systems of the brain stem. It means that the dimension involves the reticular activating system. His proposal was founded in the belief that cortical excitation in response to external stimulation (such as the effects of competition) is higher in introverts than in extraverts. It is through the linkage of the reticular formation and hypothalamus with personality dimension that Eysenck believes differing personalities will reflect their positions on a level of arousal continuum. For example, cortical excitation in response to external stimulation (e.g. a tension situation in sports) is postulated as being higher in introverts than in extraverts. This is because he saw introverts as having weaker nervous systems than extraverts. [Eysenck: 1947]
**Farrow (1975)** investigated motor performance variables for a sample population of professional baseball player, eight motor performance variables were selected as valid measure of components of professional baseball playing ability were defined as (1) running speed, (2) muscular power, (3) depth perception, (4) shoulder flexion strength, (5) throwing speed, (6) agility, (7) eye hand co-ordination, and (8) reaction time.

In addition the athletic motivational inventory which measures 13 personality traits were administered to each subject. 103 professional baseball players who trained in Florida during 1974 baseball season were selected as subjects. Statistical procedures used for analyzing the data were percentile rank, one way analysis of variance. It was concluded that test battery of vertical jump, eye hand co-ordinations, Illinois’s agility run, shoulder flexion strength, glace and bat tests, medicine ball put, 60 yard dash and throwing speed successfully differentiate between players classified on low minor leagues and those who are either high minor or overage league players, with significant difference in performance favoring the late two group. [Farrow J: 1975:1369-A]

**Frank H (1984)** Studied the personality profiles of athletes and non-athletes in six developing countries by administering 16 PF (form A) from each country eighty subjects were selected out of which 40 were sports men who had participated up to inter collegiate level and 40 were non sports men of the same educational qualifications. Half in age category were male and other half female. Differences in personality profiles were observed from male and female S21dents from Venezuela, Nigeria, Hong- King and Taiwan, Similar differences were also found among athletes and non athletes from Venezuela and Nigeria. Further
comparisons were also made with each ethnic group. [Frank: 1984:650-659]

**Gary L. Bennington (1973)** administered Cattell's junior senior high school personality. Questionnaire to 90 male high school subjects. Subjects were selected in such a manner that 30 were gymnasts, 30 were football players, and 30 did not participate in organized athletics, Aova was utilized to determine whether differences existed between scores for the groups on in each of 14 personality factors. The scores for gymnastics and football groups on each of fourteen personality factor, the scores for the non athletic group in intelligence. The groups were not different on 13 of the 14 personality factors. [Gary: 1973:90]

**Gruber and Perkins (1978)** found women who competed in inter Collegiate Championship to be significantly higher on the factor F (sober), and I (tough minded) when compare to non-participant group. William (1978) reported that selected personality traits are frequently associated with the elite female athletes and specifically that the successful female competitor generally tends to be more assertive, dominant, self-sufficient, independent, aggressive, reserved achievement oriented and have average to low emotionality then the unsuccessful female competitor. [Gruber & Perkins: 1978:40-52]

**GourangaSaskar (1999)** tested the relationship of co-coordinative abilities to shooting performance in soccer on 25 male football players. The findings reveal that there were no significant relationships of the coordinative abilities to shooting performance in soccer. The findings were, there is no significant relationship between shooting performance and coordinative abilities of footballer. [Gouranga: 1999]
Eysenck, Hans J (1990) Hans Eysenck’s work on extraversion – introversion, spanning the last three decades, has had a similar impact on experimentally oriented psychologists and thus has stimulated much research on the topic. Although Eysenck’s orientation is more biological and behavioral in contrast to Jung’s intrapsychic approach, the influence of the two has been largely complementary. Eysenck contends that there are three major personalities. Dimensions, extraversion-introversion, neuroticism-stability and psychoticism which are largely independent of each other and which together convey a wealth of information about an individual’s life styles. Eysenck defines the basic difference between extroverts and introverts as biological, rooted in the reticular activating system of the brain.

This is the system that monitors incoming neural impulses resulting from environmental stimulation it either stimulates (excites) or inhibits responses of arousal level of the cortex of the brain. Extroverts and introverts are held to differ in the relative strength of the opposing processes of excitation and inhibition such that introverts typically have higher levels of cortical arousal compared with the extroverts.[Eysenck: 1990:289-291]

HarpreetShergill (March 1992) conducted a study on personality differences between low and high anxiety female hockey players, the study was conducted to find the personality differences in female hockey players. Total sample of 49 players were taken in divided into two groups on the basis of their scores on state trait anxiety inventory by Spiel Berger 1970. Group one consisted of 28 players which had more state anxiety. Group two which consisted of 21 players had lower state anxiety than trait anxiety. 16 PF Cattell 1970 was used to
measure their personality traits. Discriminate analysis was applied to
analysis the personality difference.

The results showed that players in Group two scored in higher on
six personality traits namely less intelligent V /s more intelligent, sober
V /s happy go lucky, shy V /s venturesome, forthright V /s controlled
while subjects in group one scored more on reserved V /s out going,
affected by feeling V/ s emotionally stable, humble V /s assertive,
expedient V /s conscientious, tough minded V /s tender indeed, trusting
V s I aspic OUS, practical V /s imaginative, conservative V/ s experimenting group, dependent V /s self- sufficient and relaxed V /S
tens. Javet S Breedlone (1978) predicted gymnastic performance based
on personality traits and preferred self concept was determined.
Jackson’s personality research firm and the TN self concept scale wee
the administered to 48 Women collegiate gymnasts scores form those
instruments were compared to performance in four individuals
gymnastic events (Vault, balance beam, parallel bars and floor exercises)
and the all round events as determined by mid scores,

Significant results were found between gymnastic ability and self
concept measures of physical self, moral ethical self, total variability and
column total variability, in the area of personality and frequency
additional statistical analysis using R Techniques were applied to
determine if selected cluster of personality traits of self concept measure
would predict of gymnastic performance. No significant factors were
found. [Harpreet: 1992:103-95]

HarpeetShergill (Feb 1991) conducted a study on the personality
difference of successful and non successful volleyball players. The
sample consisted of 24 successful and 24 non successful volleyball
players personality characteristics measured using 16 PF and ST AI
forms discriminant analysis was applied to study the differences between the two. The results indicate that two group can be discriminated on the basis of given variables. The result also showed that while factor a (easy going), (ego strength), G (Superego) and H (Venturesome) are the traits of successful players; state anxiety, trait anxiety and dominance were the dominant characteristics of non-successful players. [Harpeet: 1991:2]

**H. Harrison, Clarke and K.H. Peterson (May 1961)** compared the some to types of boys aged 10-15 years and classified into four categories of athletic ability as indicated by coaches ratings. The categories were exceptional - III, good II, regular participant I, - and non participant NP, comparison were made at to level viz. elementary and junior school. [Harrison, Clarke and Peterson: 1961:163-75]

**Hein (1954)** found team sports participants to be more extraverted than those participating in individual sports. He also found that participants on individual and dual sports possessed less amount of self assurance. [Hein: 1954]

**Jhon C. Meiors (1973)** administered the cattel's i6 PF to 110 varsity athletes participating in 7 different sports, Results of the study indicate that the reserve athletes were more outgoing and warm hearted than first string athletes. Specific differences were reported athletes, in swimming, volleyball, water polo, wrestling and track. [Jhon: 1973:49-52]

**Jhon P. L A. Place (1954)** Attempted to determine whether specific professional baseball. A successful group of 49 major league players were compared to a non successful group of 64 major league players. The Minnesota multi phasic personality inventory and major biographical date sheet were employed result indicate that league players are batter able than minor league players too.
a) Apply their story desire towards a definite objective by exercising self discipline.

b) Adjust to occupation as professional baseball, requiring social contact or ability to get among well with other people.

c) Exercise initiative.[Jhon: 1954:295-313]

Joan, Elise Duda (Nov. 1981) administered a questionnaire to 250 subjects to compare personality characteristics of adult women athletes, young women athletes and college women athletes. The aim of the study was to investigate similarities and differences in personality characteristics of college young adults and adult women athletes. The result indicates the absence of significant differences in the overall personality profiles of three groups of women engaged in competitive sports. However, there were significant differences at the 0.01 level between the women engaged in competitive sports and those engaged in non competitive sports. The capacity for status was significantly lower for college women as compared to with adult women and young adult women. Sociability was significantly lower in the case of young adult college women athlete. Social presences and self acceptance were not significantly different among the groups.[Joan: 1981:2005A.]

Kamlesh (1980) made an attempt to diagnose the incentive motivation of Indian athletes through wood’s Incentive Motivation Inventory and conclude that excellence, affiliation, success, and sensation are the major reasons for the athletes to participate in competitive sports, and male and female athletes to do not differ on the level of their incentive motivation. He also found that Indian athletes are average in their motivational profile. [Kamlesh: 1980:35]

Kamlesh(1986) studied the personality traits of: Genera" and 'Reserved' category physical education majors. Eysenck personality
inventory was administered on 38 males (28 general and 10 reserved) and 38 female (28 general and 10 reserved) physical education majors. They reported that male and female education majors, within their category groups differed significantly on extraversion and neuroticism.[Kamlesh: 1986:1-3]

**Kamlesh M L (1986)** conducted a study on 191 athlete who took part in the 41st interuniversity athletic meet from fine tests namely, Torrance’s test of creative thinking (Non verbal form A, standard progressive matrices (adults) by Ravent, IPAT (Form A) by Eysenck, and A,S, reaction study adopted by Dr. N.K.Dutt were administered. Results revealed by Dr. N.K. Dutt were administered. Result revealed no significant difference in the performance of various Athletic groups (high performing and low performing boys/girls) as the tests of these variables (leaves of creativity intelligence, anxiety, extroversion - introversion and neuroticism and ascendance submission) high performance did not show any marked trend, negative of positive from the low performers nor did men Athletes differ from women Athletes significantly of any of the variables. Kamlesh studied the personality traits of: Genera" and "Reserved' category physical education majors. Eysenck personality inventory was administered on 38 males (28 general and 10 reserved) and 38 female (28 general and 10 reserved) physical education majors. They reported that male and female education majors, within their category groups differed significantly on extraversion and neuroticism. [Kamlesh: 1986:159-75]

**Kane (1970)** found a complex relationship between the second order personality variable "extraversion" and performance of "track athletes" (sprinters) and they were found to be frequently more
extraverted than middle distance runners. He claimed that as the distance increased, there was a trend towards introversion. [Kane: 1970]

Kennelly M Moyle (1971) certifiable analyzed the effects of sports participation on the modification of various personality traits possessed by an individual before starting his/her sports career. Here he emphasized on the most commonly found personality traits in the championship athletes as stated by the Ogilvy.

These traits are:-

- Emotional Stability.
- Tough Mindness.
- Self-assurance.
- Basic trust in people. [Kennelly : 1971:466-484]

Kenneth, Tillman (Dec. 1965) administered A. S. reaction study of all port, cattell's 16 pf questionnaire and kuder preference record from C and found that the upper physical fitness group had a significantly higher ascendance rating on the A-S reaction study test than did the lower group. The upper physical fitness group appeared more Sargent (f) social dependence (02) and less tense (04) than the lower physical fitness group in cattell's 16 pf questionnaire. In kudar preference record form N the upper physical fitness group was found to have greater preference for activities, more of a social service interest and also ranked higher on the scientific and mechanical scores were as the lower physical fitness group scored higher on computational, musical and clerical scores. [Kenneth: 1965:478-483]

KiranSaidu (1989) conducted a personality study on 200 collegiate sportswomen who participated in basketball, cricket, hockey, handball, Kabaddi, Kho-kho, volleyball, badminton, cross country, chess, gymnastics, shooting, lawn-tennis, swimming, Table tennis, track
and field. Another group of 200 non-sports women of matching age and educational level where also selected. [Kiran:1989:129-134]

Kirkcaldly, B. D. (1982) found no significant differences regarding the personality dimension of team and individual athletes. [Kirkcaldly: 1982:141-153]

Kistler J (1970) compared 116 college varsity male athletes with 116 non varsity athletes be found that varsity players demonstrated poorer sportsmanship than the non varsity players his findings are supported by those of Richardson (1962) in a study. Comparing who had not using 233 students, Richardson discovered not only that the latter winners record lower in sportsmanship, than there who had not won latter, but that subsidized athletes scored lower in Sportsmanship than athletes who were not subsidized. [Kistler: 1970:55-58]

Martens, R (1977) Martens has described CTA as “a tendency to perceive competitive situation with feeling of apprehension of tension” (Matron, 1977 p.23) while state anxiety refers to stress “characterized by subjective consciously perceived feeling of apprehension and tension, accompanied by or associated with activation or arousal of the automatic nervous system (Spiel Berger, 1966, p.17). Therefore, trait anxiety is a relatively stable characteristic while state anxiety is predicated by more immediate factors that pose a threat to the individual.[Martens: 1977:23]

Kroll & Crenshaw (1970) used the cattell's 16 PF to study 387 athletes. The group under study consisted of 81 football players 141 gymnast, 94 wrestlers, and 71 karate participants. On the basis of certain traits the 4 groups seems to fall into 2 groups: the football players and wrestlers, were similar in their psychological profiles, both groups were significantly different from gymnast and karate participants the results are surprising because football is a team sport and wrestling on
individual sport. The finding of Kroll & Crenshaw are perhaps explained by the fact that football and wrestling are gymnastic combative activities requiring, strength, endurance, agility. It is common in Junior high school & High schools to find football player who are in the wrestling squad or vise-versa.

On the other hand few gymnasts are also football players or wrestlers. In summary the result showed gymnast to be rather intelligent and relax, possessing weaker super age strength, and with a serious outlook toward life. Karate participants reflected on opposite set of characteristics being tense conscientious and rule bound and independent both groups were man well sufficient more reserved and detached than wrestlers and football player.[Kroll & Crenshaw: 1970:97-106]

Kroll, W (1967) other studies have also shown that athletes are higher in those straits associates higher in those traits associated with leadership, power prestige esteem and sociability. The hypothesis that athletes in a given sport posses traits specific to that sport in supported by the evidence as Kroll's study indicated certain sports attract certain types of athletes. For example, at is the performance of the individual tennis players that determined whether the match is won or lost because tennis is not a sport requiring group to operation or effort, tennis players might not score on sociability or extroversion. On the other hand they might be expected to square high in dominance. Individual sport might attract participants who fit Alderman's definition of dominance. [Kroll: 1970:45-49]

Kroll, W. (1970) Researchers have attempted to differentiate between superior and inferior performance in various sports. Kroll & Carlson (1976) reported no difference between participant of various levels of ability in wrestling and karate. Singer in a previously mention
study comparing baseball and tennis players also found no difference between highly successful and less successful tennis players. [Kroll: 1970]

**Lynch (1985)** conducted a study on muscular power, reaction time and visual perception as related to striking abilities of second grade children. The purpose of the study was to determine if significant difference existed in the performance of various physical and perceptual variables. In addition, an attempt was made to predict striking ability and to determine whether significant differences existed in the performances of males and females on selected variables tested. [Lynch: 1985:2240-A]

**Luo and Andrich (1993)** Psychometrics is applied widely in educational to measure abilities in domains such as reading, writing, and mathematics. The main approaches in applying test in these dominos have been Classical Test Theory and the more modern Item Response Theory and Rash measurement models. These modern approaches permit joint scaling of persons and assessment items, which provides a basis for mapping of developmental continua by allowing descriptions of the skills displayed at various points along a continuum. Such approaches provide powerful information regarding the nature of developmental growth within various dominos. [Luo and Andrich: 1993:253-276]

**L.Rees (Feb 1950)** concluded a study in title body build, personality and neurosis in women. He concluded that constitutional factors are responsible of mental abnormality and found a correlation between extroversion and ectomorphs body build. He also found relationship between psychopathy and criminality. [Rees: 1950:426-434]

**Lotter (1960)** Investigated to determine the inter relationship among reaction time and speed of movement in different limbs. Two -
movement basic to sports skills, modified baseball throws and football kicks were studied in 105 college athletes of various activities. This was only a moderately high correlation between the reaction time ability of right and left legs and between right and left arms. Arm verses legs correlation was significant but low. A similar pattern of correlation between limbs was found for movement specificity was high. The reliability of individual difference was high in all the measures. [Lotter: 1960:147]

Martens R (1977) Research has been completed showing that CTA is effective in predicting various level of state anxiety (Marten 1977, Marten, Rifkin, Burton 1979). However, the strength of these relationship is inconclusive for example Marten (1977, pp. 67-68) found an increasing correlation between CTA and the latter measure Weinberg and Genuchis (note I ) investigation of male college golfers concluded that CTA was to correlate significantly with basal and pre-competitive state anxiety scores among youth male soccer players.[ Martens :1977:20-23]

Malumphy (1970) used the Cattle 16PF to compare the personality traits of 120 woman 77 athletes and 43 non athletes. In a further study, Malumphy found that athletes who played individual sports were more extrovert than who played team sports. [Malumphy: 1970:446-453]

Malumphy (1968) and Ogilvie (1968) Also conducted a related investigation, where four groups of female athletes i.e. athletes in team sports, in individual sports, team individual sports, subjectively judged sports and the non-athletes, differed on various factors, the athletes from individual sports were more extraverted than those from team individual groups. The seemed to be in disagreement with the findings of Peterson.[Malumphy: 1968: 610-620]
Malumphy (1968) in the study made of the sport participants were found to be more conscientious and tough minded, but less imaginative and less venturesome than the non-sports participants. Newman (1968) suggested that participation in high level athletic competition provides and adds a dimension to one's personality. He found that athletes were found to be more conscientious and tough minded, but less imaginative and less venturesome than the non-sports participants. [Malumphy: 1968:74]

Mcclanney B. Nelson (1969) divided college men into high fitness groups on the basis of 'APPHER' youth fitness test battery. While comparing their personality characteristics, as measured by cattle's 16 pf questionnaire, self concept and academic aptitudes, be concluded that high fitness group appeared to be more group dependent while low fitness groups were more self sufficient. Also the subject in high fitness group appeared to be more trusting and free of jealousy where as the low fitness group appeared to be more auspicious and self opinionated. [Mcclanney: 1969: 697-99]

Merriman B. (April 1960) Merriman concluded that motor ability is related to personality traits the upper motor ability group scored significantly higher than the lower motor ability group on the measures of poise. Ascendancy and interest modes. [Merriman: 1960:163-173]

Michael J. Montgomery (1977) administered the athletic motivation inventory and Cattel's 16 PF. Questionnaire to the top 13inter collegiate basketball players at Boise State University during the spring of 1976 to determine if there are personality traits differences between men and women basketball players at the college level. The result showed that for the traits of drive, aggression, determination and self confidence on the AMI significant difference were found between men and women
basketball players at the .05 level. No significant differences were found for the traits of guilt prove, leadership, emotional control mental toughness coach ability of truth on the AMI. The results on the 16 PF revealed significantly higher scores for men on factor E. [Michael: 1977:113]

Miers C. Jhon (1973) administered the cattell's 16 PF to 110 varsity athletes participating in 7 different sports, Results of the study indicate that the reserve athlete were more outgoing and warm hearted than first string athletes. Specific differences were reported for athletes, in swimming, volleyball, water polo, wrestling and track. [Miers: 1973:49]

Manilal, Sabastian and Thomas(1990) conducted a study to compare the coordinative abilities of junior India Basketball players and Junior Indian Volleyball players. Twenty- one girls who have attended the Junior Indian Volleyball coaching camp were selected as subjects. For coordinative ability test suggested by Peter Hirtz were administered to evaluate the coordinative abilities of the subjects. The‘t’ test was employed to determine the mean difference in different coordinative abilities between volleyball and basketball female players. The result also showed that the volleyball players have better space orientation ability and reaction ability than the basketball players. [Manilal and Thomas: 1990]

Mohan et al. (1979) found that the players were more extraversion that non-players and low on neuroticism implying more stability of emotionality. [Mohan: 1979:2:1]

Mulmisur (1967) investigated selected physical characteristic of junior Davis cup players and their relation to success in tennis agility, arm-shoulder coordination, pure speed, depth perception, reaction time,
movement time, dynamic balance. All rebounding, weight and height showed no significant correlation with success in tennis for this group. [Michael: 1967:92]

**Newman, Earl N. (1968)** Suggested that participation in high level athletic competition provides and adds a dimension to once personality. He found that athletic were more sociable, more aggressive in their approach to problems, more self confident, more critical of themselves and more extroverted than non-athletes. [Newman: 1968:104-53]

**Niblock (1960)** found that female athletics to be more energetic, enthusiastic, efficient, as possessing more leadership potential and were optimistic and more extraverted. [Niblock: 1960]

**Ogilvie, B.C. (1968)** Ogilvie found that athletes were more sociable, more aggressive in their approach to problems, more self confident, more critical of themselves and more extraverted than non-athletes. Ogilvie (1968) also found that traits like emotional stability, tough madness, consciousness; self control, low energetic tension level, self assuredness and outgoing ness consistently were associated with athletic achievement. [Ogilvie: 1968:156-162]

**Olson C. Edward (1967)** attempted to identify the personality differences among male tennis players, this study attempted to discern the personality difference among outstanding male tennis players in two categories established by tennis experts. 'Champions' were more inner directed, more pragmatic and more extrovert than mere great tennis players. [Olson: 1967:92]

**Peterson S.L., and Kroll, Kay H (December 1965)** Peterson and his associates determined if there were distinguished personality traits between the women competing in team sports and the women competing
in individual sports. Form a of 16 PF questionnaire was administered to the subject. Test was employed to compute the difference between the groups. It was concluded that the women participating in individual sports, rated higher on the personality factors of dominance, adventuresses, sensitivity, extroversion, radicalism and self-sufficiency and lower on the factors sociability, intelligence, stability, consociation, suspecting, high-self commitment or high-Eric tension. [Peterson and Kroll: 1965:433-40]

**Peterson S L (1967)** reported that women athletes who participated in individual sports, when compared to women competing in team sports were more dominant, adventures, sensitive, self sufficient and more forthright. [Peterson, Weber and Trousdale: 1967: 686-690]

**Roland A. Carlstadt, Ph.D., ABSP, LP. (2004)** The-theory of Critical Moments proposes that state induced relative activation of the left-brain hemisphere will facilitate pre-action preparation phases (sport) or strategic planning prior to critical moments of competition or important situations and decisions. The likelihood of this occurrence is predicted to increase as a function of left-brain hemisphere localized repressive coping, a behavior associated neuron physiological with the ability to functionally inhibit the inter hemispheric transfer of negative affect from the right to the left hemisphere.

Conversely, negative affect or neuroticism, a right brain hemisphere based trait, in the absence of high repressive coping, and in the presence of high absorption or hypnotic susceptibility is predicted to disrupt performance during critical moments by allowing the inter hemispheric transfer of negative affect from the right to the left hemisphere. In such a scenario negative intrusive thoughts access and remain in the ruminative left-brain hemisphere, thereby disrupting the
seamless left-to-fight shift-that has been observed in numerous EEG studies of athletes, indicative of pre-action strategic planning prior to focusing on visual perceptual demands of a sport-specific action.[Roland :2004:545]

**Rushall** (1967) while comparing personality characteristics of male swimmers within female swimmers found that females were socially bold, noisy and unrestrained in their behavior, whereas male appeared to be self centered and individualistic. It was also found that novice female swimmers were in general, more introverted than a control group of female athletes, not primarily engaged in swimming.[Rushall: 1967]

**Rushall and Ellison and Freischlog** (1968) researchers have found that athletes differ from non athletes. Whether athletes are "better" or "Worse" than non-athletes depends on the values of the observer. It does seem that athlete’s traits are usually positive. For example, athletes have been described as extroverted outgoing and socially aggressive. There are positive attributes that would probably benefit athletes in any social situation. The athletes are highly competitive is generally accepted as fact. We assumed that an individual has to have a strong competitive drive to participate in sport. After all, competition is the name of the game.

When athletes compete successfully, the competitive trait items to be strengthened. Intermittent failure can also increase competitive derive. Coaches working highly competitive athletes will have an easier task in preparing the team for an opponent, more time can be devoted to technical preparation than to motivation. On the other hand, the coach must always be aware that a negative experience can blunt that athletes’ urge to win and damage His or her performance. TO the coach,
psychological preparation must be as important as technical preparation. [Rushall and Ellison and Freischlog: 1968: 443-464]

**Rushall (1970)** several attempts have been made to identify the differences, if any, between any, between the personality of the athletic and the non athlete. In an evaluation of physical performance & personality, concluded that "Personality is not a significant factor in sports performance" this conclusion was supported Ellison and Treschlog, who found that the pain tolerance, arousal and personality of made college athletes and non-athletes are substantially similar. [Rushall: 1970: 93-104]

**Scott A Clark (1973)** compared athletes versus non-participant fresh athletes V/s senior athletes and fresh soph. Athletes V/s Junior senior athletes by using cattel's 16 pf questionnaire and revealed difference (p).05 Practical V/s imaginative, less super ego strength V/s conscientious and (.05) self assured V/s apprehensive respectively. [Scott: 1973:155]

**Shankar, G (1986)** Found that the position winner gymnasts and non position winner gymnasts of various university of India were almost equally stable and extroverts in their psychological make-up of the personality scales, however the gymnasts differed from non athletes on both the dimensions of personality. Hence gymnast better equipped mentally for successful performance and achievement in sports than non athletes. [Shankar: 1986]

**Sharma and Shukla (1986)** also concluded that athletes in various sports specialties tends to be outgoing, socially confident, emotionally stable, happy go lucky, conscientious (rules bound), venturesome, self-reliant, vigorous, confident, self-sufficient, controlled and relaxed. On the other hand, the non-athletes are reserved less
intelligent affected by feelings, weak super ego, shy, tender-mindedness, suspicious, doubting, indiscipline and tense. [Sharma and Shukla: 1986:36-42]

**Sharma S.S., and Shukla N.P.B. and Shukla B.R.K. (1990)** found that individual sports athletes were higher on conscientiousness, outgoing, superego, strength, vigorous, relaxed and tough mindedness. Singh (1986) found that the players of individual events and team games differed significantly on the extraversion and neuroticism traits of personality. In the case of both male and female, the athletic group was more extraverted and more neurotic than the hockey group.[Sharma and Shukla: 1990:88-96]

**Sharma S.S. and Shukla B.r.K. (1988)** Concluded that athletes in various sports specialists tend to be outgoing, specially confident, emotionally stable, happy go-lucky, conscientious, venturesome, self reliant, rigorous, confident, self-sufficient, controlled and relaxed. On the other hand, the non athletes and are reserved, less, intelligent, affected by feeling, weak super ego, shy tender-minuteness, auspicious, doubting in disciplined and tense. [Sharma and Shukla: 1988: 194-199]

**Shergill, Singh and Tung (1992)** conducted a study to evaluate the importance of a set of specific physical fitness components in Hockey playing ability. On the basis of available literature, 22 relevant test items were selected to measure fitness components. The sample consisted of 100 female hockey players, from four Universities of Punjab (India). The age of the players ranged between 18 to 24 years. The stepwise regression was applied to assess the importance of different variables in predicting hockey playing ability. The result of t-ratios suggested that endurance run test, standing broad jump test, grip strength (left hand), vertical jump test, wrist flexion test, age, height and
weight were significantly important in evaluating the hockey performance. Also, the results failed to find support for speed as an important predictor of hockey playing ability. [Shergill, Kanwalijit and Navdeep: 1992: 95-103]

Singer (1969) administered the Edward present performance schedule (EPPS) to baseball and tennis players and a group of non athletes. He found that non athletes scored higher than baseball group in other autonomy. The tennis group was higher than the baseball group. The results also showed that tennis players were higher in dominance than baseball players. Baseball players scored higher than tennis players in abasement. [Singer: 1969: 582-587]

Singer (1969) compared the basketball players and tennis players on EPPS norms and also the highest and lowest ranked athletes in both sports. The baseball team scored significantly lower than the other two groups, on the interception variable, lower than the tennis group of the achievement variable, lower than the norm group on autonomy and lower than the tennis group on dominance. Both the baseball and tennis groups scored significantly higher than the norm group on the aggression factor. No differences were noted between high and low rated baseball players. [Singer: 1969: 803-811]

Singh (1936) conducted the study on thirty male athletes and twenty female athletes who participated in 120 meters runs. The performance of 1st heat of the athlete who was to complete in 2nd heat was brought out and were asked that “How much you aspire for performance in this heat”. The aspiration level in seconds as told by each athlete was recorded. The actual performance by the athlete in 2nd heat was taken from records. Results shows that significant relationship was
found between aspiration level and performance in 100 meter run in the case of female athletes. [Singh: 1986:96-101]

**Singh and Singh (1986)** found that neuroticism tendency was significantly in the non sports groups of Students, whereas, no significant difference was observed in extraversion scores between the two groups. [Singh and Singh: 1986: 48-55]

**Singh A, Bar R.S. (1987)** found that both male and female handball players were just ambient. They however suggested that these studies need to the extend further to know the personality traits of the athletes in different sports events in Indian condition. Hockey, handball, kabaddi, kho-kho, volleyball, badminton, cross country, chess, gymnastics, shooting, lawn-tennis, swimming, Table tennis, track and field. Another group of 200 non-sports women of matching age and educational level where also selected. [Singh: 1987: 25-254]

**Slevin (1970)** used the STAI to investigate the effects of anxiety upon the performance novel gross motor task. The results showed that overall high trait anxiety subject had significantly higher state anxiety scores and significantly lower performance scores than low trait subject. [Slevin: 1970:17-22]

**Slusher (1964)** using MMPI found that personality differences existed even among athletes who athletes who participated in different sports. [Slusher: 1964:539-545]

**Thakur G.P., Thakur M. (1980)** studied personality characteristics of the athlete and non-athlete Indian college males using protective method of personality assessment and found that the characteristics associated with the athletes were happiness, cordial and affectionate anxiety, achievement, dominance and superior organization capacity, where as the characteristics associated with non-athletes were quiet, acquisition
passivity, rejection superior imagination. [Thakur & Thakur: 1980:175-180]

**Wemer Alfred and Gotheil Edward (1966)** compared athletes and non-athletes collegiate group using cattel's 61 PF and found athletes group having significantly higher scores on a +, F+, H+ and 02 indicating extroversion pattern. [Wemer and Gotheil: 1966: 49-51]

**Williams RL, Youssef ZI (1975)** Sports experts agree that different football position require different personality characteristics and a varied level of motor skill, e.g., quarterback position presumably demands a calm personality, a cerebral endowment, and great motor finesse. By contrast, some other positions may require sheer physical strength and a combative aggressive personality. This study investigated whether football coaches stereotype players according to their various positions and attempted to determine the profile, magnitude and consistency of such stereotyping on both personality traits and motor skill dimensions. This study also investigated the relationship between such stereotypes and the player's scores on psychological tests. [Williams: 1975: 3-13]

**William and her associates (1970)** found that the male competitive racecar drivers tended to be reserved self-sufficient. Autonomous, assertive and aggressive and scored below average on affiliation and nurturance. Williams, J.M. Hoepner, B.J. Moody, D.L. and Ogilvie, B.C. (1970) found that the female athletes like the male athletes tend to differ from the non-athlete on a number of personality factors. Also female athletes from different sub-groups tended to differ on various dimensions of personality.[Williams: 1970:446-453]

**William O’ Atwell and Edwin R. Elbel (1948)** studied the voluntary or involuntary response of individuals to stimuli under various conditions. The study was conducted in an attempt to determine whether
a significant difference in simple reaction time exists between age groups of male high school students. In this study 247 male high school students ranging in age from 14 to 17 years were used as subjects.

They were divided into their respective age groups and tested individually by the same tests for speed of hand and body movement in response to stimulus. The data were presented in terms of mean scores for age group based upon 7 trials for each subject for hand response. The coefficients of correlation between hand and body response for each group were also calculated. It is seen that for the hand response, there is a more rapid responses with each successive age group. Also there is variation in response with increase in age. [William and Edwin: 1948: 22-29]

The results of this study indicated that the high achiever scored significantly higher than low achievers on dominance and esuriency.