CHAPTER II
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REVIEW OF LITERATURE

The development of sports and the growth of interest in sports competition is one of the special features of our society. A constant desire of man is to expand the boundaries of his performing abilities. All those interested in the development of sports are not only analysing the behavioural and cognitive aspects of personality but the psychological profile is also being used for identification, placement, selection and preparation of an athlete for competition. In this chapter some critical and analytical studies have been quoted, which would serve as a base for research in the subject. This chapter is sub-divided into three parts:

(a) Anxiety
(b) Self-Concept
(c) Adjustment

(a) ANXIETY

The importance of anxiety as a powerful influence on the behaviour of contemporary man is an issue inspiring both rhetoric and investigation among
scholars from discipline as diverse as theology and psychology. Spielberger (1966) has pointed out, anxiety is a central explanatory concept in almost all contemporary theories of personality, and is regarded as a principal causative agent for a number of behaviours, both adaptive and maladaptive.

Zuckerman (1960) developed an Affect Adjective check list (AACL) to measure anxiety. An empirical method, rather than a factor analytic method, was used for item selection. Words used frequently by anxious patients and by normals in hypnotically suggested anxiety states: to describe their current mood were "afraid, desperate, fearful, frightened, nervous, panicky, shaky, tense, terrified, upset, worrying". It is apparent that people tend to use limited subject of works to describe the experience called "anxiety". Zuckerman also uses works which were checked less frequently by persons rated as anxious (e.g. calm, peaceful, happy) and these words are scored for anxiety if they are not checked. Subsequently to the development of AACL Anxiety Scale, Zuckerman and Lubin (1965) added scales for depression and hostility and the test is now known as the Multiple Affect Adjective Checklist (MAACL). There are two forms for the MAACL: The "General", or trait form asks the teste to check words which describe how he "generally" feels and a "Today-now", or state form asks the teste to describe how he feels now or has felt on the day of the test or for my specified intermediate period of time. Both forms of the MAACL use the same adjectives.

Spielberger (1966) developed a Trait-State theory of anxiety and he and his students have used the trait and state forms of MAACL anxiety scale to test predictions from the theory. More recently, Spielberger, Gorsuch, Lushene
(1970) developed their own measures of anxiety. The State-Trait Anxiety Inventory (STAI). The STAI items are bring statements such as "I feel upset" (State), or "I worry too much over something that doesn't matter" trait. The test responds on a 1-4 point scale for each item. Although there are some items in common, the trait and state forms are different.

Cattel (1971) views states as "trait change factors". In contrast, Thorne (1971) who regards states as the principal data of psychology and traits as "limiting cases where etiology remain so constant that the recurring states assume the constancy of Traits". Spielberger's (1972) position is intermediate between these extremes. He defines traits as individual differences in the frequency with which states have been manifested in the past and the probability that such states will be experienced in the future. Spielberger believes that traits may be measured by questionnaires that will predict state responses to situations perceived as relevant. However, he has also noted that prediction from trait anxiety measures is limited to certain types of stress situations, i.e., ego or failure threat, as opposed to impersonal threat of pain. If we accept Spielberger's definition of a trait, then a trait measure is valid only to the extent that it can predict states in some specified range of situations. Perhaps we need the dimension of situation built into our trait items in a more systematic way. Trait measures should be developed that sample both situations and responses, as in Endler, Hunt, and Rosmstein's (1962, 1968) S-R Inventories Anxiety and Hostility.

Spence and Spence (1966) which states that differences between high and low anxiety subjects would occurs only when a stressor was present.
Martens (1977) construction of the Sport Competitive Anxiety Test (SCAT) has represented a notable standard of this principle by its measurement of Competitive Trait Anxiety (CTA). This construct assesses individual differences in perceiving competitive situations as threatening and leads to corresponding differences in A- State responses. The SCAT Manual (Martens 1977) presents impressive data and information documenting theory, development, reliability, and validity of this inventory. Essential validity was best demonstrated in that SCAT. Predicted program A- State Scores (r=.64) as compared to the STAI A- Trait (r=.30) and coaches' ratings (r = .12) (Martens and Simon, 1976).

Bahrke, Michael Steveen (1977), compared the influence of acute physical activity and "non-cultic" mediation versus a control treatment on state anxiety. Seventy- five adult male volunteers served as subjects with 25 Ss randomly assigned to each group. Physical activity was performed at 70 percent of Vo2 Max for 20 minutes by Ss in the exercise group. Ss assigned to mediation group practised Benson's Relaxation Response for 20 minutes and the Ss in the control group simply rested quietly in a reclining chair for 20 minutes. State anxiety was measured by means of the spielberger STAI,and it was assessed -(1) Prior to, (2) immediately following,(3) ten minutes following each treatment. Oxygen consumption, heart rate, skin temperature and blood pressure were also measured as confirmatory variables under selected conditions. The data were analyzed by means of a two-ways repeated measures ANOVA, and this analysis revealed that a significant reduction in anxiety occurred for each treatment. This held for both those ss falling within the
normal range for state anxiety, as well as those ss regarded as high anxious. It was also noted that none of psychological variables differed significantly following the central and mediation treatment. The present evidence suggests that acute physical activity, no cultic mediation, and a quite rest session are equally effective in state anxiety.

Cratty, B. (1973), found that all anxiety is not disruptive. An optimum level seems to be needed to perform well. On the other hand, if the athlete is too anxious or projects an "I don't give a damn" attitude, performance is likely to be less desirable. Anxiety is a general trait as well as a temporary state of being. A research make it clear that a moderate amount of anxiety in athletes is often an aid to superior performance. Ford (1968), for example, found no positive correlations between measures of anxiety and performance. However, he did find that some competitors did better when their anxiety seem to elicit increase in performance. McGown (1969) found that basketball players scoring moderately high in a test of anxiety (ITPA) performed better in competitive situation than did those with lower anxiety scores. Hammer (1974) got similar results when measuring anxiety among wrestlers.

Morgan and Johnson (1978) also reported that successful athletes possess higher perceived ability, greater satisfaction and a lower state of anxiety than less successful athletes also possess more desirable social traits than less successful athletes. Martin (1978) investigated several facets of anxiety and motor performance, as they relate to sports competition itself. Specifically, he was looking at a comparison of the effect of trait anxiety levels on the performance of a complete motor response time task in the competitive
and non-competitive situation. He also looked at the function that the pre-stimulus delay had on performance and the additional effects of the past successful athletic experience as they related to performance. Male volunteer (N-72) undergraduate student in professional and general program physical education classes served as subjects. Subjects were randomly selected from the upper and lower 20 percent scores on the Martins Sport Competition Anxiety Test (SCAT) (N = Approx. 2,000). Statistical analysis of variance procedure. Sincere efforts were taken to ensure confidentiality of all performance of those involved. Statistical results on the investigation showed that the athletic experience, pre-stimulus delay period, competition, and trait anxiety had an effect upon the performance of a complex motor response time task such as the one employed in this investigation.

In addition to the area of anxiety and performance, the study of how anxiety may be reduced through physical activity and exercise program has generated much attention. Research in this area has distinguished between acute (short-term) and chronic (on-going) effects of exercise. Results have been quiet consistent in documenting anxiety reductions 5-30 minutes post-exercise (acute effect) (Devries 1968; Devries and Adams 1972; and Morgan 1973b, 1979a. This effect appears to be particularly true for vigorous as opposed to light exercise (Mihevic 1981; and Morgan 1979a) and may be especially pronounced in initially high anxious subjects (Morgan 1979a). However, competition with mediation or other anxiety reduction modalities have failed to establish the superiority of exercise (Bahrke,1979). In fact, Bahrke and morgan (1978) failed to distinguish any anxiety-reduction differences between exercise
mediation, and a control group that had rested for 20 minutes in a recline. The authors suggest and provide corroborative evidence that simply taking "time-out" may be as effective as exercise or other techniques for reducing anxiety in the average person.

Martens, Rivkin and Burton (1980) conducted a follow-up investigation testing coaches and athletes' ability to predict each other's A-state before competition. Fifteen high school interscholastic girls volleyball teams (N = 105) completed Martens (1977) Sport Competitive Anxiety test (SCAT) at practice sessions. Then, using the Adapted Version of Spielberger's State Anxiety Scale, each coach (N = 16) estimated the pre-game anxiety level of their coaches. The competitive state anxiety inventory (CSAI : Martens, Burton, Vealey, Bump, and Smith, 1983) was then taken by the players and coaches within 10 minutes of a regular season game. The overall correlation between coaches' ratings and actual athlete A-States was again very low (r = .10). Individual correlations between coaches' predictions and athletic CSAI scores ranges from -.60 to +.55. As expected, SCAT was an excellent predictor of both coach and players A-States. Somewhat surprisingly though, the athletes were quite good at predicting their coaches' A-States (r = +.51).

Richard H. Cox (1986), conducted a study. The purpose of his study was to determine the relationship between skill performance in volleyball and competitive state anxiety (CSA) of female athletes. Each athlete's CSA was measured prior to each 15 point game using the CSAI. Volleyball performance was measured throughout the tournament as a function of service reception, serving and spike performance. data were analyzed using linear and curvilinear
regression procedures. Significant linear relationships were observed between spiking performance and CSA. These relationships were linear in nature and suggest that spiking performance decreases as CSA increases.

As such the inverted-U hypotheses offers a great deal of utility to the coach. The coach attempts to prepare the athlete in such a manner that state anxiety levels are somewhere near the ideal (Landers, 1980; Oxendine, 1970).

Two studies have been reported in which the relationship between pre-competitive state anxiety and athletic performance were studied in a field setting. A study by Klavora (1977) utilized boys high school basketball teams and designed this investigation as a test of the inverted-U hypothesis. State anxiety was measured prior to each game and performance as ascertained by coaches ratings, for each athlete, across eight to 14 games. State anxiety scores ranged from 10 to 40, while performance was categorised by coaches as outstanding, average or poor. Tabulation procedures resulted in average anxiety scores for five points along the horizontal (anxiety) axis. A configuration of means strongly supportive of a bell shaped curve were displayed.

In the second study, Sanstroem and Bernardo (1982) utilized a design incorporating repeated state anxiety measures on the same people. Subjects were female college basketball players from eight teams who participated in a double elimination tournament. Pre-competitive state anxiety was measured for each athlete 20-30 minutes before each game of the tournament. Basketball performance was assessed as total point (TP) scored and overall performance measured as a function of shooting percentage total points, rebounds, assists, steals, turn overs and personal fouls. Resultant SA scores for each athlete
were ranked from low to high. Thus, three categorical levels of pre-competitive SA were formed (low, moderate, high). Performance scores associated with each anxiety score were then averaged according to anxiety level. Orthogonal polynomials were employed to test the within-subject SA variance for trend. The results showed that both linear and quadratic trend components contributed significantly to total point variance across the three SA levels. For overall performance, a significant quadratic component was obtained. Thus, in terms of overall performance, the results provide support for the inverted-U relationship between pre-competitive anxiety and basketball performance. In the present investigation, the relationship between competitive SA and athletic performance was studied in female collegiate volleyball players. The relationship between SA and volleyball performance has not been reported in the literature.

Furthermore, in the present investigation, regression as opposed to ANOVA was used to test for quadratic and linear components. Arbitrarily forcing anxiety scores into three anxiety categories as done in the Sonstroem and Bernardo (1982) study raises service methodological questions. The subjects were 157 female volleyball players who participated in an invitational collegiate volleyball tournament in the fall of 1983. The field included 16 teams, 15 of which consented to participate in the research of the 15 teams who participated, eight were from NCAA Division I schools, three were NCAA Division II and four were from NAIA schools. Informed consent was obtained from the subjects and coaches, and confidentiality assured. Volleyball performance was measured throughout the tournament as a function of service
reception, serving and spike performance. Significant linear relationships were observed between spiking performance and competitive SA for tournament rounds one, two and four. Round robins (RR) play off (PO) and total tournament analyses were also significant for the linear component on spiking.

Researchers have continually supported the multidimensional nature of competitive state anxiety since the initial development of the CSAI-2. However, studies have contradicted each other when examining changes in competitive state anxiety prior to, during and after competition. Gould, Petlichkoff and Weinberg (1984) for example, found that somatic anxiety and cognitive worry changed differently prior to wrestling competition and a volleyball tournament. Somatic anxiety increased prior to competition but cognitive worry and self confidence remained stable. However, Karteroliotis and Gill (1987) found that cognitive worry and somatic anxiety followed similar temporal patterns prior to and during competition. Additionally, events associated with competition (e.g. feedback, spectators) and knowledge of results, particularly success and failure feedback, may influence anxiety levels. That is, successful performers are likely to increase (Martens and Gill, 1976; Scanlan 1977; Scanlan and Passer 1979). Unfortunately, initial sports psychological research has shown that coaches are poor predictors of their athletes' pre-competition psychological states. For example, Martens and Simon (1976) examined the ability of coaches to predict both the state anxiety (A-state) and trait anxiety (A-trait) levels of their athletes. In their first study, the coaches of 16 women's inter collegiate volleyball teams were found to be very inaccurate estimators of their athletes. A-trait levels (r = .11). In a second investigation, it was also shown that nine high school
basketball coaches were unable to predict their athlete’s (N = 136) A-state levels prior to an upcoming game (r = .12).

Growing evidence in the sports psychological research literature has supported the motion that an athlete’s level of emotional arousal or state anxiety has a major effect on his or her performance (Gould, Petlichkoff, Simons, and Vevera, 1987; Klavora 1977; Sonstroem and Bonstroom and Bernardo, 1982). Recognizing this relationship, coaches often attempts to alter their athletes’ arousal level in an effect to enhance their performance. Coaches assume in these instances that they are aware of the emotional state of their athletes and they know what their athletes require to reach their optimal state of arousal. Clearly a coach who can accurately estimate the state anxiety or arousal levels of his or her athletes and help them shift appropriately to their individual optimal level of arousal would be a great asset to those athletes.

Recently a 12-month follow-up and pre-post analyses done by Doyne et al., (1987) individuated development of feelings of accomplishment and enhanced self-efficacy in subjects. Fremont and Craig Lead (1987) found aerobic exercise helping in alleviating depressed mood. Soban et al., (1987) found reduction in trait anxiety of their subjects following physical conditioning exercises. Balogun (1987) observed that more physically fit individuals, especially females, demonstrate better body image, enhanced self-concept and self-esteem when compared to the less physically fit females. Raglin and Morgan (1987) reported that anxiety reduction through physical exercises. Positive effects of exercises on mood (Dyer and Grouch, 1987) and enhancement in self-concept (Plummer and Koh, 1987) have also been
reported. Infact, the exercises have been seen to become so much part of one's life that if it is missed even for a day the individuals report feelings of guilt irritability, depression and sluggishness (Crossman et al., 1987).

Crocker, Peter-Ronald Earl (1988): Investigate SMT in a quasi-experimental controlled study with high performance youth athlete. The study sample consisted of the 1987, Alberta Canada games men and women's (under 19) volleyball teams separated into control and treatment groups, within each team, on the basis of geographical location. The treatment group was administered on eight week. Package consisting of one hour modules. All subjects were evaluated on affective, cognitive and performance measures at pre-treatment and post-treatment, while the treatment players were also evaluated at six months post-treatment. Further data was collected three weeks post-treatment at the National Challenge Cup.

The analysis at post-treatment found that the treatment subjects had fewer negative thoughts to video-taped volleyball stressors and superior performance compared to control group. The positive thoughts were in the expected direction. The anxiety measures, however, did not reveal any trends in the direction of hypothesized results. Follow-up analysis revealed some gender differences with the women's team exhibiting more durable treatment effects, although this data is confounded with time. The challenge cup analysis revealed some results that were contrary to the expected treatment effects. The male control group had lower cognitive anxiety while the control females had lower somatic anxiety in same games compared to the treatment groups. Bowyer, Garry Ronald, (1988): found that the anxiety and the relationship to
athletic performance has been a topic of considerable interest to coaches and athletes in many sports. With a large number of American youth involved in competitive sports programs, it is important for researchers to study anxiety and the age group athlete. This study was to compare the state anxiety levels among ages, genders and skill levels at practice and pre-competition. The study included 137 athletes. Each subject completed the Spielberger state Trait Anxiety Inventory A-state twice; once just prior to the state age group swimming championships. The statistical procedure used was a 3x2x2 repeated measure analysis of variance. Mean comparisons were made using the Newman Keuls Multiple Range Test which indicated that the 15-18 age group had significantly higher state anxiety than males and significantly higher state anxiety was found at the pre-competition situations than at the practice situations.

Burton (1988) examined relationships among components of the Competitive State Anxiety Inventory-2 (cognitive worry somatic anxiety and self-confidence) to each other, to physiological measures and to performance prior to, during, and after bicycle competition. Undergraduate male students (n = 24) participated in three counter balanced conditions- (a) non-competition, (b) success, and (c) failure participants completed the CSAI-2 at pre-mid, and post competition in each condition and frontalis muscle activity was recorded at those times. Results revealed that the cognitive and somatic components of state anxiety are moderately related to one another and change differently over-time intra-individual regression analysis conducted to test relationships between anxiety and performance revealed no linear or curvilinear relationships between any of the CSAI-2 components and performance. The frontalis
IEMG/performance relationship was best explained by a linear trend. The findings support the prediction that competitive state anxiety is a multidimensional construct with related components that are influenced differently by competitive conditions and task demands.

Although sports psychologists have devoted considerable attention to anxiety responses in reaction to threatening situations, such as sport competition, numerous questions remain concerning the dynamics of competitive anxiety and its relationship to performance. This lack of understanding may be due in part to the failure to employ multidimensional and sport specific measures of anxiety.

Agyajit Singh (1988) investigated the sport competition anxiety level of 118 top level Indian track and field players (76 male and 42 female) and 71 hockey players (45 male and 26 female) attending national camps in the age range of 18-36 (males) and 16-26 years (females) and administered to them the Sport Competition Anxiety Test by Martens (SCAT). It was concluded that the male athletes and players have less competitive anxiety as compared to females. Athletes, both male and female differ significantly in competition anxiety with hockey players. Sports competition anxiety is not related to positional play in hockey.

Seventy three handball players (36 male and 37 females) of varsity level were administered Marten's SCAT for adults by Singh and Brar (1988). It was concluded that elite inter-varsity handball players - both men and women have moderate level of competitive anxiety though overall level is moderate in both cases.
Mann et al (1988) studied a sample of 44 male players (football 16, basketball 14, volleyball 14) and administered Hamm's scale of competitive Anxiety to them. It was concluded that no significant differences exist in the level of competitive anxiety among football, basketball, and volleyball teams. Football team varied significantly from other teams, depicting higher levels of competitive anxiety on anger mode of response.

Bowen Hancy Helon (1989): conducted a study to examine the effects of levels of training for counsellors - in - training and levels of education for supervisors for those counsellors - in - training, state and trait anxiety and self-rating of counselling skills of trainees. Trainee participants completed a pre-test and post-test instrument package which included an experimental made questionnaire, the state trait anxiety inventory, the counsellor rating form, and the supervisor rating form (post-test only). Twenty-eight sets of trainees and their supervisors completed the instruments. Results of the multivariate analysis of covariance (MANCOVA) of the data indicated no trainee by supervisor interaction effects for the set of anxiety and self rating dependent variables. Multivariate analysis of covariance indicated no significant main effect for either training level or supervisor education level on the set of dependent variables.

Kumari and Kamlesh (1990) investigated the level of state and trait anxiety of track and field male athletes (N=21) and boxers (N=21) by administering to them the State and Trait Anxiety Inventory (Self Evaluation Questionnaire) by Spielberger et al. Both the track and field athletes and boxers exhibited a higher level of state as well as trait anxiety. Boxers were found to
be significantly higher in state anxiety and track and field athletes were higher in trait anxiety.

Recent anxiety literature in sports psychology has focused on the multidimensional nature of anxiety (e.g. Burton, 1988, Jones, Swain, and Cale, 1990; Martens, Burton, Vealey, Bump, and Smith, 1990). This line of research has been generated from the work of Liebert and Morris, 1967. Borkovek (1976), and Davidson and Schwartz (1976), who distinguished between cognitive and somatic components of anxiety. Cognitive anxiety is characterized by negative expectations, a lack of concentration and disrupted attention; somatic anxiety refers to bodily symptoms such as sweating and increased heart rate (Morris Davis, and Hutching, 1981). Morten et al's (1990) adoption of this conceptual approach with in the context of sports psychology culminated in the development of competitive state anxiety inventory-2 (CSAI) a sport specific questionnaire measure of competitive state anxiety.

Studies have shown that the patterning of self-confidence is generally less consistent during the pre-competition period (JONES, 1991; Parfitt, Jones, and Hardy, 1990), but theoretical predictions are that neither cognitive anxiety nor self-confidence are likely to change unless expectations of success change during pre-competitive period (Gould et al., 1984; and Marten et al., 1990).

More recently researchers have continued this type of examination for multidimensional perspective type of sport (Krane and Williams, 1987, and Martens et al., 1990), sex (Jones and Cale, 1989; Jones et al., 1991), and gender role endorsement (Swain and Jones, 1991) are individual differences variables that have been scrutinized. Karen and Williams study reported
differential temporal patterning between golfers and gymnasts. Specifically, somatic anxiety increased during the pre-competitive period in the gymnasts, but remained same in golfers.

Austin Swain and Graham Jones (1991) investigated the relationship between sports achievement orientation and competitive state anxiety using competitive state inventory -2 (CSAI-2) Pre-competitive levels of anxiety. The subjects were (60 male athletes) who competed for Loughborough during the 1989 season. Due to the exploratory nature of this approach no specific hypnosis were formulated but, following Gill 1986 and Bandura(1977) it was predicted that high competitive subjects would exhibit lower levels of competitive state anxiety and higher and higher levels of self confidence than would low competitive subjects.

Harry Prapavess, J. Robert Grove, Peter J Mc Nair and Nigel T. Cable(1992) conducted a study on self regulation training, state anxiety and sport performance with a single subject, twenty year old male state level small-bore rifle shooter. Utilized a single subject, A-B, multidimensional and multimethod design to examine the impact of intervention. Programme on state anxiety and performance in an elite rifle shooter. Results revealed that cognitive anxiety, somatic anxiety, gun vibration and urinary catecholamine decreased where as self confidence and performance increased from baseline to treatment.
(b) SELF-CONCEPT

The relationship of sports performance has been studied by many researches to reveal the phenomena whether self concept and sport are related or not. In these studies an attempt has been made to answer the question, whether sports is a helpful test in the development of self-concept and sport performance has been studied at various stages of competition. In the following paragraph all such studies have been quoted.

An almost incredible array of constructs has proliferated around the term self-concept. Most approaches to this area of the self, however, assume that the self-concept has both a "content" and a "structure". That is, our self-concept is, most basically, what we think we are, in various respects, and thus has content. But these component images of ourselves are integrated with each other in same way, thus implying structure. The latter point is subtle, but it is one that researchers in self-concept often emphasize. For example, one commonly used measure, the Tennessee Self-Concept Scale (Fitts, 1964), has separate sub scales for the physical self, moral ethical self, personal self, family related self and social self. All these aspects of one's self concept are logically distinguishable from each other, yet it would be hard to imagine each of them existing in total isolation from the others. For example, people's images of their social selves often have important connections with their images of what they are like physically.

Strong self-concept provides an individual more confidence, assurance and assertiveness, his actions with other people and in the endeavours he undertakes. This is fairly obvious in the self-confidence and self-assurance
displayed by athletes and in the results of evaluation of their self-concept. Self-confidence, for example, have been identified as being high in athletes by Johnson, Hutton and Johnson, (1954). Kroll (1967), Brunner (1969), Reid and Hay (1974), Schendel (1965, 1970), in addition, also found athletes to have high sense of personal worth and high self-concepts.

Norbert Robert (1971) examined forty male youth of grades VII through X obtaining attitude towards sports by modified wear physical education attitude inventory, socio-economic-status measured by Hollings head index of social position and self-concept by Davidson adjective check list. It was reported that relationship between sports participation attitude towards sports, socio-economic-status, and the self-concept of male problem seven relationships were tested only two significant comparison resulted. The youth who had played sports had a more favourable attitude towards sports and sports participant of white-collar background had a more favourable attitude towards sports than did the white-collar non-participant.

Pate (1973) employing two way ANOVA statistical procedure observed that winning performance appears to have a significant positive effect on the wrestler's concept of self high school. Wrestler have a lower level of self-concept as a result of low level of wrestling performance, whereas wrestlers who demonstrate a high level of winning performance appear to have a significantly higher positive self-concept.

According to Encyclopedia of Psychology (1975) investigated the self-concept is the totality of attitudes, judgements and values of an individual relating to his behaviour abilities and qualities. Self-concept embraces
awareness of these variables and their evaluation self-concept means what an individual thinks about himself. It is own conception of his intelligence, abilities, academic status, behaviour temperamental qualities. Mental health, emotional evidences and socio-economic status.

Considerable discrepancies frequently appear between one's self-concept and his ideal self. The difference between the two has been used for the basis for determining the extent of frustration and maladjustments. Frequently compensatory defense mechanisms and excessive emotionality and directly related to the person's attempt to defend the self-concept and to bridge inadequacies in life activities. While some adjutive difficulties may stem from feelings of exaggerated superiority. In most cases apparent and external reactions of superiority are efforts to hide or deny feelings of inferiority. Inferiority may be experienced by persons on all levels of life but is a wide spread adolescent phenomenon.

Brownfain's (1952) findings support the hypothesis that individuals with stable self-concepts are better adjusted than individuals with instable self-concept. The former also higher level of self-esteem as measured by their ratings on the inventory of items defining self-acceptance. They were found to be free from inferiority feelings, better liked by others and displayed less evidence of compensatory defensive behaviour.

Panucci, Mary Rotch Ford (1977) investigated anxiety, self-concept and creativity variables, especially as effected by sex and ethnicity among California continuation high school students.
The subjects were 204 students representing the intact population of six has Angles City Continuation High Schools. The concepts of anxiety, creativity, and self-concept operationalized through group administered instruments developed by Newton Matfessel, professor of educational psychology at the university of Southern California, and his staff at project potential.

To test for significant differences in performance by sex and ethnicity singly and in combination, data were cost into a 2x3 factorial design and randomly reduced to N = 24. Where significant main effects due to ethnicity were indicated, Tukey's HSD Procedure was used to determine which pair-wise comparisons were significant. The findings of the study showed significant differences in anxiety associated with both sex and ethnicity, females measured more anxious than male; blacks more anxious than whites. Significant differences in self-concept were found between males and females, favouring female on two measures of self-concept. It was impossible to evaluate whether differences in self-concept by ethnicity were more than would be expected by chance, since the comparisons were not independent.

Shawver, Carole Ann (1978): The study was given by him concerned with the analysis of the self-concept of a group of college students enrolled in risk physical education activity classes. The problem was to determine whether there would be any significant difference in the self-concept of the three groups of students in selected risk physical education classes, non-risk physical education classes, and the control health class. Data for the study were collected from students enrolled in the health class and five physical education activity classes (Scuba, Diving, Canoeing, Modern Dance, Bait Casting and
Bowling). The statistical problem was to determine what differences might exist among the pre-test scores and the differential gains of the groups on the scale scores of the tennessee self-concept scale.

The results of the testing were analyzed by means of a one factor analysis of variance. The three levels of the independent variable were the risk group, the non-risk group, and the control group.

The findings indicated there were no significant differences between the self-concept scales of the three groups at the out-set of the semester. It was also found that there were no significant differences among the differential scores of each group. A difference was found in the groups scale scores on the Tennessees self-concept scale when compared with the national norms.

A body of research is beginning to appear recently indicates a high relationship between a person and his achievement in life, especially school and sport achievement (Holmen and Parkhouse, 1981). The major premises underlying this information are that the manner in which a person sees himself is a product of how others view him and that these perceptions are the major products in his achievement behaviours. That is, if you think you are good, and you perceive others as thinking you are good, then you will be good (Alderman, 1974; Sarbin, 1952).

Riley (1983) studied the inter-relationship between self-concept and physical performance from the perspective of symbolic interaction theory and findings revealed a significant positive relationship between self-concept and physical performance.
Mathew, K.Jose & Ranganathan, P.P (1987) in their study there concluded that there is no difference in the self-concept of volleyball and football players. But when the various dimensions of self-concept were compared separately it was concluded that:

1. The volleyball players have significantly higher self-concept regarding their health & physique.
2. There is no difference between the temperamental qualities among them.
3. Volleyball players and football players showed more or less similar concept regarding their academic status.
4. In case of intellectual abilities the study showed no difference between volleyball players and football players.
5. Habits and behaviour seem to be alike for volleyball & football players of this study.
6. Both of them are having the same concept regarding emotional tendencies.
7. The volleyball players are having significantly higher self-concept regarding their mental health.
8. The self-concept regarding socio-economic status of volleyball and football players showed no difference in this study.

Najdawi Juliet Kubein (1988): has shown a strong relationship between self-concept and achievement. To date studies of the relationship between
self-concept of achievement in school children have dealt with self-concept as a global attribute. In this study, Harter's self perception profile for children (SPPC) provides the opportunity to study more specific aspects of the self-concept, namely: Scholastic Competence, Athletic Competence, Social Acceptance, Physical Appearance, Behavioural Conduct, and Global Self-Worth. Three specific questions emerged. First, the differences between achieving and underachieving gifted students in the six dimensions of the SPPC. Second, the differences between gifted students males and females on the various dimensions of the SPPC. Third, the differences between achieving and underachieving and underachieving gifted students scores, third through eighth grades. 271 gifted students (176 males and 95 females) classified as achievers (89) participated in this study, along with each one of these questions this study charts the profiles associated with self-concept across Marter's six domains.

It was found that the gifted students as a group revealed a profile similar to the norm group with the exception of scholastic competence self-concept which was above the norm group. Within group differences lower scores in most domain of self-concept were found in middle school compared with elementary school students, although interaction with achievement level was not found in the same way as with scholastic competence. Gender differences in this sample follow previous research which indicates that girls consider themselves higher than boys in behavioural conduct, While boys view themselves as higher than girls in athletic and physical self-concept. Across
domains, these gifted students showed significantly higher scholastic self-concept than behaviour of self-concept.

Lee Jaeman (1988) conducted a study on 261 college students enrolled at Nicholls State University in Thibodaux, Louisiana during the 1987 fall semester. Participants were enrolled in the physical activity classes of weight training, karate, or gold. Other subjects were enrolled in courses in the professional education sequence for prospective elementary teachers and a student development class. The adult index of adjustment and values was used as the measure for self-concept. This instrument consisted of a list of forty-nine trait words on a scale of one to five which provided scores for self-concept, self-acceptance, ideal self and discrepancy. This instrument was administered to participants before and after a twelve week period of classes. Correlated t-tests were used to determine whether or not there was a significant change in any of the four sub-scores for each of the four groups during the period between the administration of pre-tests and post-tests. The findings indicated changes significant at the .05 level on self-acceptance for the gold group. In addition, there was a significant difference in both the self-concept and in the discrepancy scores for the professional education group. Kumari, A. (1988) conducted a study with regards to the self-concept of sports & non-sports school girls of Himachal Pradesh. The sample consisted of 600 students 300 sports and 300 non-sports girls. She used Sarswat (1984) self-concept scale. She found that sports girls belonging to rural and urban areas were found better in physical self-concept, social self-concept & temperamental self-concept in
comparisons to non-sports girls of the same areas. Non-sports girls are better in educational, moral and intellectual self-concept than sports girls.

McNamee Sarah Louise (1989): investigated psychological variables and coping styles contributing to the maintenance of the mental disorder bulimia. Self-concept, alienation, defense mechanisms, inter-personal style, and social adjustment were examined. Twenty females were diagnosed with bulimia and females normal controls matched on age and educational level responded to the bulimia test, Tennesse Self-Concept Scale (Clinical and Research Form), University of California Los Angles Interpersonal Relations Orientation Behaviour and Feeling Scales, Coping Operations Preference Enquiry, Beck Depression Inventory and a personal data sheet. Bulmic volunteers were solicited by means of advertising from clinical settings, a private university and the general community in the middle tennessee area. Normal control volunteers were solicited by means of advertising from the same private university and same general community.

A discriminant analysis showed that the groups differed significantly at the 100 per cent level of prediction. Significant difference were observed at p .001 on self-concept, loneliness, depressions, personality integration, general maladjustment and expressed and wanted needs for inclusion, control and affection. Bulimics reported that they participated in social interaction significantly less than normal controls (P .001). Bulimics revealed a strong preference for waiting for others people to take the initiative toward them in establishing interpersonal relationships. The extent to which bulimics reported waiting for other people to take the initiative towards them. The area of
inclusion, control and affection was correlated significantly with the severity of their bulimic symptoms as measured by frequency of purging, depression and general maladjustment.

O'Donoghue, Raphael K. (1989) investigated the impact of fitness on psychological health in general and on self-concept in particular is reviewed from diverse literatures. Within the physical education literature there is a lack of clarity as to precise nature of relationship of self-concept to fitness. It has been shown that fitness and self-concept are not directly related, but that perception of fitness has meditational role. However, it is not clear if this relationship is evidenced across the sexes, and over different age groups.

The current study tested existing theory concerning the effects of fitness on self-concept for females. An extension to existing theory was suggested and tested in the form of a revised model. This model states that the effects of fitness on self-concept is mediated by perception of fitness and body esteem.

Fifty-eight females were tested on measures of fitness, self-concept, body esteem, and perception of fitness. The model testing procedure seemingly unrelated regression was used to test the fit of the model representing existing theory that fitness effects self-concept indirectly through perception of fitness and body esteem. It was found that this extended model represented a better fit (R2:35) for the data than the original three variable model (R2:18). These results suggested that the effects of fitness on self-concept are mediated by perception of fitness and body esteem. It was concluded from the current studies that fitness may not have a direct effect on a females' self-concepts; the
effects are better seen in subjects' perception of fitness and levels of body-esteem.

Sharma K.R. (1993) investigated relationship of self-concept, adjustment to performance of team players. The sample consisted 240 male players selected randomly from the institutions of Chandigarh. He used the sarwat 1984 self-concept scale. He found that high performance of football players found negative relationship with physical, temperamental self-concept, physical and moral self-concept. Significant difference was observed among four groups on moral, intellectual and total self-concept.

(c) ADJUSTMENT

Biddulph (1954) reported that superior athletes showed higher levels of personal and social adjustment than that of less skilled athletes. Therefore, adjustment is positively related with sports performance. Kroll and Carlson (1967) have reported no differences between superior and inferior participants. Almost no study has reported a negative correlation between adjustment and sports performance.

Cronbach (1960): The adjusted person is one who commits himself to socially desirable goals and uses his energies effectively in working towards them. Adjustment is a means to the end of accomplishment.

Kane (1960): In his study used discriminant function analyses and reported that although men physical education students differed significantly in personality than general men student group. The women physical education
students from general women student, men and women physical education
students had a very similar personality profiles.

Arvil (1966), who administered the Washburne social adjustment
inventory to 244 male and female college freshmen enrolled in active courses
at college of the school of the Ozarks,M in 1964. The mean gain were then
compared to determine if there was a difference in gains made in social
adjustment of co-educational class over segregated classes. The "t" test for
difference between independent means was the statistical test used in making
the comparison.

The following conclusions were made:

1) Co-educational classes and segregated in physical education do not
differ significantly in contributing to social adjustment of college
freshman.
2) In the segregated classes, males and female do not differ significantly
in game made in social adjustment.
3) Co-educational classes males and female do not differ significantly in
gains made in social adjustment.

Koening (1969) in his study on high school Basketball players found that
personality differences existed between athletes and non-athletes with respect
to sociability, group-orientation and emotional control. Both university team
members and instrumental players had higher self-concept than non-participant
with respect to sportmanship, degree of feminity and family influence.

Antonelli and Mascellani (1973) conducted a study on adjustment of 351
Italian top athletes. He used the Bell's inventory (1937) of adjustment. He found
that male athletes were better adjusted than female athletes, and sports were
athletes seemed to have a better adjustment were, athletics, volleyball, sailing
and fencing. The sports in which adjustment was found poor were cycling,
rowing and gymnastics.

Rani, Usha (1974) studied the personality adjustment differences of (N
= 170) athletes and non-athletes, by administering the Bell's Adjustment
inventory (1937). Mean, Standard deviation and t-ratio statistical techniques
were used to asses the data. She found that there was differences in
personality adjustment between athletes, who participated in group & non-
athletes. In the individual events group, badminton players have better home
adjustment than track and field athletes, wrestlers and tennis players. AS far
as the team games group were concerned, hockey players were better adjusted
in health than football, basketball and volleyball players. Non-athletes had
better home adjustment and poor health adjustment as compared to the
athletes. Athletes were more aggressive than non-athletes and were also
emotionally more unstable than non-athletes.

Grewal (1986) has conducted a study on 549 students of affiliated
college of Panjab university, Chandigarh. He included university student also.
Grewal has concluded that inter-personal relationship of physical fitness test
(AAHPER) and attitude towards physical activity and adjustment revealed that
the co-efficient of correlation showed a significant relationship between attitude towards physical activity and adjustment for entire population, high and middle socio-economic level group. But the relationship between other variable were found to be insignificant at .05 level i.e., physical fitness and attitude towards physical activity ($r = 0.07379$) against the required value $r (.05) 242 = .127$.

Cummings, Alban John (1979) has conducted a study on a total of 348 students, selected from the 5th and 6th grades of 6 non-Catholic Parochial elementary schools, participated during the 1976-77 school year. There were three groups of 116 each classified as American born, early arrivals, and recent arrivals. The personal adjustment, the social adjustment and total adjustment were measured by the California test of personality and the educational achievement variables were measured by the Stanford Achievement Test. In order to test for significant difference among the mean scores of the groups, the statistical technique of single classification analysis of variance were employed. The minimal level of statistical techniques of single classification analysis of variance were employed. The minimal level of statistical significance accepted in the study was the .05 level. The finding of the study were found between the groups classified as American born, and recent arrivals on the factor of personal adjustment. There were no significant differences found among the groups on the factor of social adjustment. Significant differences were found among the groups classified as American born, early arrivals, and recent arrival on the factor of total adjustment. There were no significant differences found among the groups, on the educational achievement variable of vocabulary, comprehension, language and total reading.
Bhatt, A. (1987) has also studied the adjustment level of athletes & non-athletes by using Bell's Adjustment Inventory (1937). A descriptive analysis was carried out & it was found that home adjustment of non-athlete was significantly better than athletes. There could not be found any differences in their health, social and emotional adjustment. Basketball group was found to be emotionally better adjusted than non-athletes. Football group was superior in health adjustment, but inferior in social adjustment than non-athletes. No differences was found in home & emotional adjustment. Volleyball group was found to be submissive & retiring in their social contacts & emotionally unstable than non-athletes.

Portgalland (1988) conducted a study on health condition and temperament before and after physical conditioning programme. The purpose of the study was to asses the strength endurance training on health condition and temperament of athletes specializing in different sports discipline. The subjects were the students of professional course in coaching at NAS, South Centre, Bangalore. They were from track and field - 27, Volleyball-16, Hockey-18, handball-16, lawn-tennis-5, kho-kho and kabaddi - 28, cricket - 11. The test used was seven point bi-polar profile constructed by Mathesius (1972). The results indicated that after the strength endurance training, track and field athletes, kho-kho and kabaddi player's had shown the negative change in health conditions to a significant level. In other disciplines, they had shown positive change but not significant.

Singh, Nasib (1988) investigated psychological characteristics of athletes in team games and individual events. The psychological variables included the
adjustment variables i.e., home, health, social, emotional, educational, and total adjustment. The sample consisted of 202 athletes (88 individual and 114 team athletes). The athletes were attending the coaching camps in various games to participate in All India Inter-University Competitions. The adjustment inventory of Sinha and Singh (1980) was used along with some other personality measures. The finding of the study were that individual and team athletes did not differ significantly on various areas of adjustment except educational adjustment, where the difference was significant. Significant inter-sport differences were found on all areas of adjustment. The successful athletes also differed significantly from unsuccessful athletes in all areas of adjustment.

Kumari, A. (1988)- conducted a study with regards to the adjustment of sports and non-sports school girls of Himachal Pradesh. The sample consisted of 600 students (300 sports and 300 non-sports girls). She used 'Sinha and Singh's (1984) adjustment inventory for school students. She found that sports girls belonging to rural and urban areas were better in all variables of adjustment i.e., emotional, social and educational than non-sports girls. There were also significant difference between rural and urban girls in emotional, social and educational. The rural sports girls were found to have better emotional adjustment than the urban sports girls. In social adjustment, the rural girls were also found better as compared to the urban girls, both in the sports and non-sports groups. However, in educational adjustment, the urban girls in both the groups were found better than the rural sports girls.
Alegaonkar (1989) conducted a study of self-concept, emotional, social and educational adjustment and physical fitness. Sixty-two boys in the age group of 12-14 years were tested for self-concept and adjustment. Chi-Square were derived of various factors of adjustment, various factors of physical fitness and total physical fitness index. The results indicated that self-concept correlates to some of physical fitness variables. The factors of adjustment and the general adjustment did not correlate with the factors of physical fitness index. The main conclusion was that though the physical fitness and self-concept are highly correlated, yet the adjustment is not correlated significantly with them.

Nangia & Sengar (1989) administered Sinha & Singh adjustment inventory (1980) on 320 sports persons & non-sports persons. Subjects included players of university level teams of basketball, volleyball, hockey, cricket, athletics, badminton, table-tennis and non-sports persons. 't' test revealed significant differences in adjustment levels of sportsmen & sportswomen as well as between sports persons & non sports persons. Significant differences were also found in the players of team and individual games.

Yadav (1992) studied selected personality variables, adjustment and socio-economic status of mass and class athletes of college and university levels. The sample consisted of 200 mass and 200 class athletes selected randomly from five universities of North-West India. The events included basketball, football, handball, volleyball (mass sports), cricket, badminton and lawn-tennis (class sports). Cattell's 16 PF questionnaire (1962), Sinha and
Singh's adjustment inventory (1980) for the college students and the socioeconomic status scale by Gyanendra P. Srivastava (1982) were used. Analysis of variance (ANOVA) was computed on different variables. The results indicated that mass sports athletes performed significantly better than the class sports athletes on adjustment variables i.e., health, social, emotional, and educational. The results with regard to successful and non-successful categories of athletes have not been found significantly different on adjustment variables except on health adjustment. The results, with regard to adjustment of different groups of athletes, indicated inter-group differences on various sub-scales of adjustment. The handball and the basketball groups were found better adjusted than all other sports groups on home and health adjustment respectively.

Nirmaljit (1992) conducted a study with regards to the adjustment as related to performance and gender in team sports. The sample consisted 320 athletes (160 male and 160 female) selected randomly from colleges and universities of Haryana and union territory of Chandigarh. She used Sinha and Singh's 1980 to measure all the area of adjustment the findings of the study were: The university athletes were found significantly different from the college athletes on social, emotional and total adjustment. The male athletes from the studied team sports were found better adjusted than the female athlete from the same sports groups on all the adjustment variables except home adjustment in which the difference between the male and female athletes were not significant. Sharma, K.R (1993) investigated relationship of adjustment to the performance of team players. The sample consisted 240 male players selected
randomly from the institutions of Chandigarh. He used Bell's Adjustment Inventory (1961). The results indicate that the relationship was observed between high performer football players with health adjustment only. Low performer basketball players only found negative relationship with health and emotional adjustment.