CHAPTER - II

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ANXIETY

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 testee to check words which describe how he "generally" feels and a "Today-now", or state form asks the tests 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) 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.

Spielberger (1966) developed a Trial-State theory of state 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 being statements such as "I feel upset" (State), or "I worry too much over something that doesn't matter" (Trait). The testee responds on a 1-4 point scale for each item. Although there are some items in common, the trait and state forms are different.

Spence and Spence (1966) which states that differences between high and low anxiety subjects would occurs when a stressor was present.

Cattell (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.

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.

Gerson (1978) determined the theory of competitive stress and a measure of competitive trait anxiety (Sport Competition Anxiety Test - SCAT) could predict pre-competitive state anxiety. Female varsity and intercollegiate softball players participating in the National Women's Intercollegiate softball tournament were used as subjects (N=107). The SCAT and a state anxiety measure were administered to the players 30 minutes prior to game time on the second day of the tournament. A multiple regression analysis with pre-competitive state anxiety as the criterion variables and team standing, batting average, and SCAT as the predictor variables yielded a significant relationship between SCAT and pre-competitive state anxiety. This supported the hypothesis, that there would be a positive relationship between SCAT and pre-competitive state anxiety. An additional multiple regression analysis with batting average as the criterion variable indicated that the anxiety measures were significant predictors of performance in this setting. Therefore, the predictive validity of both the theory of competitive stress and the SCAT instrument received further support, as the results of this study indicated.

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.

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 \( r=+.51 \).

Growing evidence in the sports psychological research literature has supported the notion 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 attempt to alter their athletes' arousal level in an attempt 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.

Gould and his colleagues (1987) examined whether linear or curvilinear (inverted-U) relationships exist between competitive state anxiety inventory-2 sub-scales scores and pistol shooting performance in a paradigm that addressed, previous design, methodological and data analysis problems. Officers \( N=39 \) from the University of Illinois Police Training Institute served as subjects shot on five separated occasions, immediately after completing the CSAI-2. (Martens, Burton, Vealy, Bump and Smith, 1983) a multidimensional measures of state anxiety. However, relationships between both types of anxiety and performance were predicted to support inverted-U as opposed to linear relationships. Self confidence was predicted to be positively related to performance. Results were analysed using the intra individual analysis procedures recommended by Sonstroem and Bernardo (1982) and showed that cognitive anxiety was not related to performance and somatic anxiety was related to performance in a curvilinear (inverted-U) fashion, and confidence was negatively related to performance.
Berger and his colleagues (1987) investigated the relationship between swimming and anxiety reduction in 2 programs differing in exercise frequency and duration. 100 college students in beginning or intermediate swimming classes completed the State-Trait Anxiety Inventory and a Cognitive-Somatic Anxiety Questionnaire at the beginning, middle, and end of the course. As reported there was significantly less state anxiety after swimming than before, regardless of exercise duration and intensity. The activity was not more conducive to reducing somatic than cognitive anxiety.

Krane and Williams (1987) compared changes in cognitive anxiety, somatic anxiety and self confidence prior to competition by high school gymnasts and collegiate golfers. A version of the competitive state anxiety inventory (CSAI-2) was administered 24 hours, one hour and ten minutes prior to competition. Results of ANOVA's showed the golfers and gymnasts to have different patterns of changes in the CSAI-2 sub-components. The gymnasts displayed an increase in cognitive and somatic anxiety and a decrease in self-confidence and no change in somatic anxiety. Overall, the golfers had lower cognitive and somatic anxiety and higher self confidence than the gymnasts. Multiple regression analysis indicated that one of the CSAI-2 sub components was able to significantly predict high school gymnastic and collegiate golf performance. The results are discussed in terms of differences in sports, competitive conditions, and skill and experience levels.

Gill (1987) examined the relationship of cognitive worry, somatic anxiety and self-confidence, all components of the CSAI-2 (competitive state anxiety inventory-2) to each other, to physiological measures, and to motor performance prior to, during and after competition. In addition, the prediction that only somatic anxiety increases prior to competition was examined. Forty one undergraduate males competed in a motor task while the experimenter monitored heart rate and blood pressure responses. Each subject competed
against a confederate for 10 experimental trials and completed the CSAI-2 prior to, during and after the competition. The results confirmed the multidimensional nature of the state anxiety construct and provided evidence for the independence of cognitive worry and somatic anxiety. However, both dimensions followed similar temporal patterns prior to and during competition. Finally, the results confirmed the non-significant relationship between psychological and physiological measures of anxiety.

Bijender and Jain (1987) administered different tests on police trainees a manifest anxiety scale, a level of aspiration (LOA) test, and a conciliation test as a measure of task performance. The design was a 3 by 4 factorial one with 3 levels of anxiety and 2 levels of aspiration. Results of analysis of variance (ANOVA) indicated that the main effects of anxiety were significant with moderate anxiety. The interaction of anxiety and LOA also emerged significant, showing the facilitative effects of high LOA at moderate and low levels of anxiety.

Frank and others (1988) conducted an experiment on 24 male and 24 female undergraduates, completed questionnaires assessing 6 dimensions of anxiety: planning, doing a library research, administration of a test or instrument, doing statistical analysis, writing out research results, and presenting the results to an advisor/professor. Six applications of the concept specific Anxiety scale were used to examine the dimensions of trainee researchers anxiety, and scores on the 6 sub-scales were analyzed. Findings show identifiable trainee researcher's anxiety. Anxiety about statistics was a significant area of anxiety for all students, with women indicating more anxiety. Presentation of results to an advisor/professor and administration of a test produced identifiable anxiety.

Battmann and Wolfgang (1988) analysed feedback seeking behaviour.
in 2 studies in which 24 male college students (Exp I) and 72 adults (Exp II), working on long series of tasks, had the opportunity to request various forms of achievement feedback. Since complex tasks were used, feedback only marginally affected learning. Anxiety, competence and expenses for obtaining feedback served as independent variables, Results show that students intending to optimize their affective state (i.e. reduce anxiety) had a strong preference for external feedback and used such feedback mainly to neutralize aversive internal feedback. In contrast, students who tried to use feedback as a means to enhance or assess performance suffered from an increased affective load.

Piedmont and Ralph (1988) investigated the independent and interactive contributions of achievement motivation and anxiety to performance on a cognitive task. Experimental manipulations of expectancy of success and presentation rate were selected as situations to arouse these personality variables in 135 undergraduate students completed scales of achievement and motivation as well as the state-trait anxiety inventory before completing a cognitive task. Results indicate that the positive effects of achievement motivation were constant; regardless of situational manipulations, but under some circumstances situations facilitated performance in and additive manner. Anxiety had a differential effect on performance contingent on levels of achievement motivation.

Agyajit Singh (1988) investigated the sport competition level of 118 top level Indian track and field players (76 males and 42 females) and 71 hockey players (45 males and 26 females) attending national camps in the age range of 18-36 (males) and 16-26 years (female) 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 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.

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 Schwatz (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. (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.

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. Cabie (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 multi-method 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.

**SELF CONCEPT**

Some of the frequently cited research studies on psychological differences between athletes and non-athletes were conducted by various research workers. One of the earliest investigators to demonstrate that athletes and non-athletes differ on self-concept was Schendel (1965, 1970). Schendel
(1965) concluded that at both the ninth and twelfth grade levels the athletes generally displayed more positive personal and social characteristics than the non-athletes.

Koening (1969) found that high school basketball girls had a higher positive self-concept than the non-participants. Snyder and Streitcer (1975) also found similar findings in case of high school athletes. Schendel (1970) by using non-parametric statistical procedure including the Chi-square test, the median test and an analysis of variance reported that college athletes have higher positive self-concept than the non-athletes. King and Chi (1974) studied the relationship between personal characteristics and athletic involvement. The findings indicated an affinity between personal characteristics and athletic involvement and participation. Playboy (1976) found that athletes did not tend to rate themselves higher than non-athletes on originality, nor was there a clear pattern for athletes to rate themselves as political conservatives relative to non-athletes.

In his studies on self-concept Frost (1970) concluded that all sportsmen were of the opinion that 'others perception' serve as an added an important stimulus to perform well, inspire them to try harder and motivate them to perform better. 'Self-image' is also an important concept as far as team motivation is concerned. When a team has over a number of years developed a 'pround heritage' or a 'winning complex', the consciousness of this image serves as a powerful motivating factor. Coaches and trainers over the years have tried to develop and have utilized such a tradition in preparing teams for contests.

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-concepts. Self-confidence, for example, has been identified as being high in athletes by Johnson, Hutton and Johnson (1954), Kroll (1967), Brunner (1969), Reid and Hay (1979), Schendel (1965, 1970), in addition, also found athletes to have high sense of personal worth and high self-concepts.

In a study concerning the impact of high and low sports performance on the self-concept of athletes, 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 wrestlers have a lower level of self-concept as a result of low level of wrestling performance, whereas the wrestlers who demonstrate a high level of winning performance appear to have a significantly positive self-concept.

In a somewhat different nature of study on self-concept and by using Rosenberg's self-esteem scale, Schultz (1973) observed no significant differences between the positive and negative self-concept groups on their performance of a gross task. However, there was an observable trend for the positive self-concept group to achieve higher scores during the performance of the motor task than the negative self-concept group.

Ibrahim and Morrison (1975) conducted a study on 100 athletes representing high school and college and 100 non-athletes. They found that athletes were average in their self-actualizing traits and less than average in self-concept. Male high school athletes differed from non-athletes in both self-concept and actualization, while female athletes differ in self-actualization only.

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 deal 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 adjusive 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.

Kay et al. (1973) and French (1977) reported a significance positive relationship between self-concept and sports ability on a sample of school children. In a related investigation 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.

Panucci, Mary Rotch Ford (1977) investigated anxiety, self-concept and creativity variables, especially as affected by sex and ethnicity among California continuation high school students.

The subjects were 204 students representing the intact population of Angles City Continuation High Schools. The concepts of anxiety, creativity and self-concept operationalized through group administered instruments developed Newton Matfessel, Professor of Educational Psychology at the
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 pairwise comparisons were significant. The findings of the study showed significant differences in anxiety associated with both sex and ethnicity, females are 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 activities 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 outset 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 Tennesses 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).

In a comparative study on the self-concept of high school baseball players, college baseball players and non-players, Bunnell (1978), using Tennessee self-concept scale (TSCS) reported that baseball players had a significantly higher positive self-concept than the non-players. College baseball players had a higher self-concept than the high school subjects; the baseball players position had no effect on the self-concepts of the players. The researcher concluded "the data presented in this study tend to support the belief that athletes possess higher self-concept than non-athletes".

Morris et al. (1981) found that the self-esteem scores of competitive swimmers were positive and higher than normal population.

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.
Gurdial Singh and Kalpana Debnath (1986) studied the competitive performance and self-concept of Indian gymnasts. They found that the better performance group was better in self-concept scores when compared with the poor performance group. The better performance of the group, they claimed could be attributed to its better self-concept. It appears that the authors have made a generalization which at the moment cannot be accepted as the study failed to control other variables.

Mathew, K. Jose and 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 and 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 and 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.
The self-concept regarding socio-economic status of volleyball and football players showed no difference in this study.

Lee Jaeman (1981) 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 the 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 significant changes 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 and 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 and 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.

Najdawi Juliet Kubein (1988) has shown a strong relationship between self-concept and achievement. To date studies of the relationship between

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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 question emerged. First, the difference 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 difference between achieving and underachieving and underachieving gifted students scores, third through eight 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 as 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.

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 mediational role. However, it is not clear if this relationships 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.

Forty-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 females' self concepts; the effects are better seen in subjects' perception of fitness and levels of body-esteem.

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, Tennessee Self-concept scale (Clinical and Research Form), University of California, Los Angeles Interpersonal Relations Orientation Behaviour and Feeling Scales, Coping Operations Preference Enquiry, Beck Depression Inventory and a personal data sheet. Bulimic 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 percent 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 others people to take the initiative toward them in establishing interpersonal relationships. 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.

Sharma, K.R. (1993) investigated relationship of self-concept, adjustment to performance of team players. The sample consisted 240 male player selected randomly from the institutions of Chandigarh. He used the Sarswat (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 differences was observed among four groups on moral, intellectual and total self-concept.

Bala Raj (1994) investigated the self-concept related to performance of volleyball players. She also concluded that there is positive relationship between self-concept and achievement.
COHESION

Miller and Hamblin (1963) in their review of the early research concerned with task structure, competition and cooperation, observed that performance was more effective for intra-group co-operation (as opposed to intra-group competition) in all of the experiments in which high means inter-dependent tasks were utilized. However, when low means inter-dependent tasks were utilized, performance was better in 14 out of 18 studies for inter-group competition as opposed to intra-group competition. Thus, if the nature of the task is given into account, the apparent discrepancy which exists in published research on the cohesion performance question, disappears.

Cratty (1967) investigated the role of coaching on the players, explanation of their performance and the change over season in cohesiveness on the UCLA football team during the 1973 season.

Lenk (1969) quotes several instances of highly effective Olympic rowing groups with extremely low cohesiveness level.

Martens and Peterson (1971) developed instrument to be employed in studies to measure cohesion, which is termed as the sports cohesiveness questionnaire. This tool is composed of questions about how respondents feel about individual to team interactions. Sub-measures included assessments of how much each team member feels a sense of belonging, how much enjoyment is experienced and how much task cohesion each individual feels. Portions of the questionnaire are, thus direct measures of cohesion. The other two components of the test are indirect measures of cohesion.

Meintyre (1971) did a field experimental study of cohesiveness, status and attitudinal changes in 4 biracial, small sport groups. Flat football was the activity for the interaction of 23 black boys from an urban junior high
school with 22 white boys and one black boy from a sub-urban school. Seven observes (five white and two blacks) recorded significant interaction between and within the four biracial sports groups over a five week period involving twenty contact session. The observers utilized the concept of effective initiative as a criterion measure of status in their daily ranking of subjects. An independent observer made comparable ranking of each group, his judgement providing a reliability check. At the eleventh contact session a sociometric questionnaire was administered to all subjects to measure a hierarchal group status on variable for example, leadership, athletic prowess and friendship. A quantitative measure of cohesiveness was introduced at session fourteen. The data obtained from these instruments served as validation of the observational data.

Upon completion of the experimental treatment, attitudes on ethnicity were assured by means of the own categories procedures. The attitudes of 46 experimental subjects were compared to an equal number of control subjects. The black boys were highest in the hierarchical structures on the variables of leadership and athletic prowess. Colour was not as salient while choosing friends. The observational data proved that bi-racial contact in sport had a positive effect upon most experimental subjects. Winning and team cohesiveness were strongly related.

Martens and Peterson (1973) in cooperation with the division of intramurals at the University of Illinois studied group cohesiveness as a determinant of success and member satisfaction in team performance. Over 1200 male university under-graduate students divided into 144 basketball teams were used as subjects. These teams participated in league, play on the basis of their residential affiliation. The members of the team stayed together. A questionnaire instrument used to assess each teak level of cohesiveness was administered one day before the first league game. On the basis of their
responses they were categorized into, moderate and high cohesive teams. The results were equivocal.

Long (1973) conducted a study on cohesion as a predictor of team success. Ss (N=47) from 3 SHS Baseball teams, were administered a questionnaire to measure team cohesion and three performance tests were administered to measure skill in baseball ability. Hitting ability was obtained from batting average calculated at the end of the baseball season. To determine which had a greater contribution to team success, Cohesion or (skills) linear regression analysis was used to compute $S^2$, F ratio and probability. Cohesion and skill measures were $P<.01$, however, cohesion and a greater loss of $S^2X$ when detected from the full model than did skill, thus cohesion had a greater power to prediction of team success than team skills. Each students evaluation of the team as a whole had a greater power of predicting success than the other two measures of cohesion concerning each Ss evaluation of his relationship to the team. The skill measure, throwing for accuracy had a greater power in predicting team success than skills concerning throwing for distance, speed and hitting ability.

Melnick and Chemera (1974) used the sports cohesiveness questionnaire developed by Martens and Peterson (1971) and followed similar procedures, but reported no relationship between pre-season cohesiveness and team success. Not only have researchers sometimes failed to find a positive relationship, but significant negative relationships have been reported for high school basketball, (Landers and Luschen, 1974; McGrath, 1962 and Lenk, 1977). The case for positive relationship is further weakened when one notes that many of the reported positive relationships actually represent mixed results, with positive relationships holding only for selected measures or certain times, within the overall design.
Cramer (1974) conducted a study of active participation in sports and family cohesion in the various social strata on a random sample within low, middle and high income census tracts in the greater Los Angeles area. A mailed two page questionnaire was used to ascertain information relative to the cohesiveness and sports playing habits of the family. The upper income group had a 45 percent return rate, the middle group 33 percent and lower group 8 percent. No significant relationship was to be found between social status and family cohesion, nor between social status and active participation. A significant relation was found between cohesion and active sports participation.

Anderson (1975) demonstrated that value similarity (typically associated with inter-personal attraction) was associated with cohesiveness in informal social groups, but goal path clarity (agreement on group task procedures) was more related to cohesiveness in task oriented groups. Thus, special measures and concepts of cohesiveness, developed through research with social groups, may not be relevant for sports teams. In sports teams, cohesiveness is not likely to be related to inter-personal attractions, nor to any shared values, attitudes or activities that are not related to the group task.

Bakeman and Helmreich (1975) designed a study wherein ten teams of aquatics were observed continually for 182 consecutive days while living and working in an under water habitat. On the basis of the results, the authors concluded that a stronger case could be made for performance causing cohesiveness than for cohesiveness causing performance success. However, the applicability of the Bakeman and Helmreich findings for sport and physical activity is questionable for at least three reasons (Carron and Ball, 1977). Firstly, that the isolated, restricted and highly structured working and living environment utilized, coupled with the length of time spent in that situation, represents a unique experimental situation, unrelated to anything in sports.
Secondly, they defined cohesion as 'time the members of the aquatic team enjoyed in conversation during their leisure time'. The nature of the experimental environment, coupled with the fact that the aquanauts were under continual observation, provided for this unique behavioural assessment of cohesion. It would be literally impossible to obtain an equivalent measure with most of the sport teams, but even if it were possible, it is doubtful that the social-interpersonal measure of 'time engaged in conversation' could be linked conceptually with performance effectiveness. Third reason is the operational definition used by Bakeman and Helmreich for performance i.e. the percentage of time engaged in work relative to the total time under observation. As Bakeman and Helmreich themselves pointed out, there is a possibility that this measure 'taps not the performance, but something for simpler, more plodding and more mundane - the passage of the time accompanied by the motions of work'. In sports, the assessment of performance is not only easier to obtain for a sport team, it is also more objective.

McClendon and Eitzen (1975) examined various inter-social contract situations that might reduce tension and increase the chances of team success of college basketball team.

Jabes (1976) investigated the relationship between cohesion and impinging factors and forces that influence group collective and category cohesion.

It focused on social cohesion were group persistence is considered to be a measure of cohesion. The Jewish experience is used as example for studying this problem due to their persistence over time. Four questions were posed for investigation. 1. Are there distinct psychological, sociological and behaviour characteristics exhibited by groups that persist over time? 2. What external patterns are related by groups cohesion, assimilation and group
persistence? 3. How do internal features and external factors interact to increase or diminish? 4. Does cohesion resist assimilation processes and contribute to group persistence? 5. The results of the investigation suggest that our present understanding points up the usefulness of a social psychological approach when viewing the phenomena under investigation. In particular the group used as an example does exhibit characteristics which differ from the general population. It is suggested that similar investigations be made of other groups which have a history of remaining autonomous within an alien culture and that investigation of the particular socialization patterns of these groups be researched thoroughly.

Zander (1976) presented a series of propositions and hypothesis dealing with recruitment and removal of group members, and some of these are directly applicable to the issue of cohesiveness. He proposed that as the cohesiveness of a group increases, the tendency to remove unattractive members is stronger. With a strong sense of group unity and integrity, a group becomes more sensitive to the potential threat that unattractive individuals represent. Conversely, group low in cohesion is more tolerant of unattractive group members. He also proposed that the tendency to remove an unattractive member decreases if the removal is potentially harmful to the group itself (i.e. by producing conflict between the individual's supporters and those who wish to remove him from the group) or if the removal decreases valued contribution made to the group.

Schlenker and Miller (1977) have proposed that attributions to the self and to the team are also influenced by the group's cohesiveness. In highly cohesive teams, the solidarity means that an attribution to the team should be highly similar to the self-attribution. On low-cohesive teams, however, there should be a marked discrepancy between the team and the self. That is, following success, an individual would assume more credit, following a failure, an
individual would attack more blame to teammates. In short, individuals on low-cohesive teams would not be as “fair”.

Bird, Foster and Maruyama (1980) obtained support for this view point with sport teams. In a study of female inter-collegiate, varsity basketball teams, they found that “under conditions of failure, members of highly cohesive teams acted in a manner that would preserve positive feelings toward the team and left the door open for a change in future outcome. Under the same negative circumstances, players on teams with low cohesiveness did the opposite”. Tropp and Landers (1979) initially determined the interaction channels (defined by passes to team mates) in inter-collegiate field hockey teams and then examined their relationship to leadership and interpersonal attraction ratings. They found that the low-interacting group was higher in leadership and attraction than the moderate and high-interacting groups. As the most dramatic example, the goalies initiated and received the least number of passes and had the lowest ranking in total interaction, and yet they received higher leadership and attraction ratings than any other position. Tropp and Landers, in summary, pointed out that these “findings suggest that the nature of the task, rather than high interaction, is the primary factor for explaining the emergence of leadership and attraction on field hockey teams ………. Task independency of field hockey goalies (reaction, blocking shots, kicking clears) is critical in leading to the high respect and popularity attained by individuals occupying this position”.

Gill (1980) conducted two laboratory experiments to investigate success/failure attribution within competing groups. In both studies, attribution to their own team or to opponents were egocentric in that member of winning team who was assigned responsibility for success primarily to their own team, whereas members of losing team assigned responsibilities for the loss primarily to the opponents. Within team attribution revealed a reverse pattern. Attribution
patterns were consistent and were interpreted as reflecting a team enhancing strategy or norm.

Slepieka (1983) and others in their paper outlined the role of social interaction in sport activity. The authors point out a critical evaluation of the so far employed approaches to the problem, above all from the point of the relation between social interaction in sport activities help to influence purposefully the progress in interaction and in that way also the sport activity itself.

Yokelson (1983) conducted a study to develop a valid and reliable group cohesion instrument that measures both task related forces as well as social related forces that utilized in a study of graduate students, working as groups, on a business simulation exercise known as executive game over a period of eight weeks, information was elicited from the subjects with the use of questionnaire containing both involvement and cohesion scale. The treatment was attempted during the first decision making meeting of the groups. In addition to group members responses to the attitude scales, comparisons were made on the basis of a group ranking, relative to other group in its industry as a result of its rate of return on beginning owners equity.

No significant differences were found between treatment groups, resulting in the conclusion that variations in the introductory format used by group members will not effect either groups out-put or their levels of both involvement and cohesion. The treatments may not have taken effect, however, if subjects tended to exchange more information than was prescribed by the treatment instructions.

Pease and Milton (1989) conducted a study of team cohesion and athletic performance. The purpose of this study was to evaluate between team cohesion and athletic performance in the case of university men's basketball
teams. It was hypothesized that there would be positive linear relationship between cohesion and performance success. A four step evaluative procedure was applied to examine the relationship between cohesion and performance. The first three steps were completed concurrently. In the fourth step, the overall relationship between cohesion and performance, relative to the information obtained in the first three steps, was assessed. The results indicated that the high degree of social and task cohesion present throughout the season made a positive contribution to practice and competitive performance, while high levels of cohesion enabled the team to exceed its initial goals. The elevated social cohesion contributed to team's ability to attain higher levels of excellence later in the season. Competitive task focus appeared to vary in relation to the opponent and importance of the game.

Carron, Brawley and Widmeyer (1990) conducted a study relating to the impact of group size in an exercise setting. Two independent studies were conducted to examine the group size in an exercise setting. In the first archival data from 47 exercise classes was used to examine the relationship between the group size and behaviour. The second study examined the relationship between the size of classes and specific social psychological correlation of group size, including the participant’s perceptions of conspicuousness, quality and quantity interaction with their leader, the opportunities to interaction, the level of crowding and density and the satisfaction. The results of the first study revealed that attention and retention were high in small and large exercise classes but reduced in medium and moderately large classes. This indicated that the relationship between behaviour and group size was curvilinear. In the second study also, one way ANOVA and trend analysis using orthogonal polynomials was computed for each dependent measure. This approach provided insight into whether the relation between group size and some of the psychological correlates was linear quadratic or cubic. Tukey B Post Hoc test was also used in all cases of significant
trends. The results of the second study also showed a curvilinear relationship
between exercise class size and participant's perceptions of the opportunities
available for social interaction and feeling of crowding and density. Both the
small and large classes were perceived more favourable than the medium
classes. The relationship between class size and perception of the instructor
as well as the level of satisfaction experienced were linear, positive and
perception decreased as class size increased.

Sandhu et al. (1991) conducted a study to assess cohesion in sports
teams. The group environment questionnaire (Widmeyer et al., 1985) was used.
The purpose of the study was to develop the norms of G.E.Q. to make the
instrument available for the use to the Indian researchers. The study was
also aimed at finding gender differences in the various parameters of cohesion.
The sample consisted of 230 athletes (male and female) representing at the
inter-university and national competitions. The subjects were from the games
of basketball, handball, football, hockey, volleyball and athletics. They were
required to respond to the four sub-scales of the G.E.Q. Hull scale was used
to construct the norms and 't' test was used to find out the gender differences
in various parameters of cohesion. The results demonstrated significant
differences between male and female athletes in all the sub-scales of the
G.E.Q. The male athletes demonstrated more cohesion in all parameters as
compared to the female athletes. Norms were found different, compared to
the female athletes. Norms were found different, compared to the North American
standards.