CHAPTER - 2

REVIEW OF LITERATURE

After a detailed description of the problem and its aim and objectives the important step is the decision regarding the strategies that will be adopted for the completion of the work. This leads to the vast area of the work that has already been completed by other researchers. This comes under the review of literature. In the present chapter an attempt has been made to review auto play a number of studies computed in the past. The relevant studies were gleaned from libraries of different Universities and from electronic sources. The literature, which has been found to be directly or indirectly related to present investigation. As there are five variables covered in this study. In the review studies connected with each of these variables have been covered systematically.

Ghaderi and Ghaderi (2012) – The purpose of Ghaderi and Ghaderi (2012) study was to find out relationship between big five factor, happiness and sport achievement in athletes of Iran. For this purpose 72 athletes were selected. Out of these 72 players; 21 players were of national team athletes, 25 players were professional athletes and 26 players were non-professional athletes. These athletes were selected by using an access sampling and assessed by using Big Five Factor Inventory (FFI) developed by Costa and McCrae (1992), Happiness Scale developed by Argyle (2001) and Sport Achievement. Pearson correlation quotient, regression and ANOVA test were applied for the analysis of the results. The analysis shows that:-

i. The amount of neuroticism in non-professional athletes (P< 1 %),
ii. The amount of extraversion, happiness and openness in the athletes of national team is greater as compare to professional and non-professional athletes (P< 1 %),

iii. The amount of agreeableness and conscientiousness of athletes of national team was significantly greater as compare to the professional and non-professional athletes (P< 1 %),

iv. National team athletes and professional athletes were negative and significant correlation between sport achievement with neuroticism (P< 5 %),

v. National team athletes and professional athletes were positive and significant correlation between extraversion, agreeableness, conscientiousness, openness and happiness with sport achievement (P< 1 %),

The analysis of data by applying regression showed that sports achievement in the athletes of national team and professional athletes, predicted by agreeableness and conscientiousness.

Anand Bhatt (2012) has conducted a study to examine the stress of senior & junior national male Hockey players and the stress of senior& junior national female Hockey players. For this purpose Arun Kumar Singh's Stress Inventory administered to 200 male & female (18-21 years and 22-25 years). The effective sample consists of 200 subjects. The age ratio is 1:1. The test consisted of 35 questions with three options: seldom, sometimes & frequently and the subjects were required to respond on one of these options. The reliability coefficient of the test was found 0.792. The validity coefficient was found 0.784. The data was collected by calling subjects in the small groups of 20 to 25 subjects and seating arrangements were made in a class-room. Variables: Independent - variable- Sex- male & female Dependent- variable- Stress. The finding, on the basis of hypothesis, showed that:-
i. Mean of stress score of senior male hockey players was 53.52,

ii. Mean of stress score of junior male hockey players was 76.10,

iii. The difference between mean of stress score of senior and junior male hockey players is highly significant ‘t’=28.58, df=398 and significant at 0.01 level.

The results related to the hypothesis have been recorded. Mean of Stress score of the Senior Male Hockey Players is 53.52 and that of the Junior Male Hockey Players 76.10. The difference between the two mean is highly significant ‘t’ = 28.58, df =398 and significant at 0.01 level. Thus the hypothesis is confirmed Junior Male Hockey Players have significantly High Stress (Personality Characteristics) than the Senior Male Hockey Players. Similarly, mean of stress score of the Senior Female Hockey Players is 59.03 and that of the Junior Female Hockey Players 73.49. The difference between the two mean is highly significant ‘t’= 19.54, df =398 and significant at 0.01 level.

Thus the hypothesis confirmed that-

1- Junior male national Hockey players have high stress than senior male national Hockey players.

2- Junior female national Hockey players have high stress than senior female national Hockey players.

**Nigam (2011)** investigate the effects of self-efficacy on sports competition anxiety. A total of forty students of psychology belong to D. P. Vipra College, Bilaspur (CG) affiliated to Guru Ghasidas University, Bilaspur were randomly selected for the purpose of study. Sports Competition Anxiety Test and the Physical Self-Efficacy Scale were administered upon all subjects who volunteers to participate in the experiment. Results of the study revealed that females who are high in self-confidence will have low levels of competitive trait anxiety. The
findings from this study also indicated that private and public self-consciousness and social anxiety are all contributing factors in predicting competitive trait anxiety.

Kumar and Prabhakaran (2011) The aim of study was to compare psychological profiles of International and National level male cricket players of Rajasthan and Madhya Pradesh. For the purpose of data collection subjects of age ranged between 18-25 years were selected from the Under-19 and Under-22 cricket teams’ of Rajasthan and Madhya Pradesh. Two groups of 49-49 players has been made, who are continuously participating at National and International level. One group made up of Madhya Pradesh cricket players and another group made up of Rajasthan cricket players. Questionnaire of Rainer and Martin’s Sports Competition Anxiety Test and Eysenck, Maudsley Personality Inventory were used to analyse the data. The questions consist of various aspects of sports competition Anxiety and Personality of the cricket players respectively. For evaluation of questionnaire two sample ‘t-test’ was applied and the findings show that:

i. There was a significant difference i.e. 2.8 in their personality parameter, that is, Rajasthan cricketers were better in their personality as compare to Madhya Pradesh cricketers,

ii. There was insignificant difference i.e. 0.11 in the SCAT (Sports Competition Anxiety Test), that is, there was no difference in the sports competition anxiety of Rajasthan and Madhya Pradesh cricketers,

These findings of Kumar and Prabhakaran (2011) show that sports psychology can help a lot in assessing the personality and sports anxiety of the players to develop physical and physiological variables but also training of the players on the basis of psychological variables.

Singh et al. (2011) The aim of study was to determine pre-competitive and post-competitive anxiety in inter university Basketball Players. For the purpose of data collection 30 players (15 male and 15
female) with the age group of 18-25 were selected from Amritsar, Punjab through purposive sampling technique. Sports Competition Anxiety Test was applied for the analysis of collected data. The findings show that there was significant difference in 0.01 levels of pre-competitive and post-competitive anxiety among the male and female inter-university basketball players.

**Ujwala1 and Jigmat (2011)** studied was to compare sports competitive anxiety among male and female state level baseball players, who participated in 3rd senior state level Maharashtra baseball champion. In this study Sports Competitive Anxiety Test (SCAT Martin et al., 1990) was used to measure sports competitive anxiety. Questionnaire was distributed among 40 (20 each) male and female players 30 minutes before the warm-up session. Descriptive statistics (mean and standard deviation) and t-test were used to analysis the data. The results showed significant difference (p<0.05) in sports competitive anxiety between male and female state level baseball players.

**Singh et al. (2010)** studied the psychological profiles of Pace Academy Cricketers. Fifteen male cricketers belonging to Pace Academy selected from different regions of the country by the Board of Cricket Control for India in collaboration with the Sports Authority of India with an idea to produce pace bowlers in future; who were undergone well planned training at LNCPE, Gwalior, Cricket stadium, Chandigarh and Pace Academy of Sports Hostel at K.V.K.No. - 01, Gwalior whereas the subjects for the study aged between 16-22 years. The Psychological profiles included Incentive Motivation, Achievement Motivation, State Anxiety, Trait Anxiety and Sports Competitive Anxiety. For the group profiles mean scores and standard deviations of Pace Academy Cricketers on various psychological variables, viz. Incentive Motivation (Excellence M=28.53, S.D. =3.11, Power M= 29.33, S.D. = 3.09, Sensation M=28.06, S.D. =4.87, Independence. M=24.86, S.D. =2.84, Success M=29.33, S.D. =3.75, Aggression M=26.00, S.D. = 2.03, Affiliation M=27.40, S.D. =2.60), Achievement Motivation M=26.46 and
S.D. =2.94, State Anxiety M=35.73 and S.D. =2.94, Trait Anxiety M=38.46 and S.D. =5.82, Sports Competition Anxiety M=17.33 and S.D. =3.84. The aforesaid Study provides base line psychological data which may be used for the individuals training programme for cricketers.

**Yadav (2010)** investigated the comparison of aggression level of players of team games and individual sports of inter-university level. Sports Aggression Inventory developed by Anand Kumar and Premshankar Shukla was selected as criterion measure. The total sample of the study was 110 players of inter-university level. 55 subjects were of individual sports, ten each from Badminton, Judo and Gymnastics; seven from Swimming while three from 100mts, 200mts, 400mts, 800mts, shot put and long jump. 55 subjects were of team games, twelve each from basketball and volleyball; fifteen from hockey and sixteen from football. The data was analysed by using t-test.

**Modrono et.al. (2010)** The researchers in the field of sports psychology paid very small attention on competitive wind-surfers; although this group of players represent an ideal subjects for the study of this psychological topic. The aim of study of Modrono et.al. (2010) was to find out anxiety and self confidence characteristics of windsurfers competing at high levels of competition with respect of gender, age, competitive outcomes and season-long ranking. For the purpose of study 79 professional and amateur windsurfers, competing in the regional and world championships events were selected. The findings of the study show that:-

i. Athletes having a better overall season ranking in their event had less somatic anxiety as compare to those who had poorer performance outcomes,

ii. Athletes who had a top five season long ranking had higher self-confidence level as compare to the athletes who had achieved lower ranking,
iii. There was no gender difference with respect to anxiety or self-confidence characteristics,

iv. Level of cognitive anxiety was higher in younger participants as compare to elder participants.

Ali et al. (2010) The aim of study was to find out the level of anxiety between male and female national weight-lifters of Manipur. For the purpose of collection of data 40 weight-lifters, 20 male and 20 female, who has participated in the national championship, were selected as the subjects. These selected subjects were of the age range between 17 to 25 years. The sports competition test, propounded by Martins (1977), was applied to determine the level of anxiety among the weight-lifters. T-test was applied to analyse the data. The findings of study show that there was no significant difference between male and female weight-lifters of Manipur with respect to sports competition anxiety.

Rokka S. (2009) The purpose of study of Rokka S. (2009) to find out the levels of intensity and direction of the pre-competitive state anxiety in the junior handball players and also to find out any possible difference between male and female handball players, as well as in relation to their athletic experience.

For the purpose of sampling 115 handball players were selected from 8 handball teams, comprising four male and four female teams, who were participated in the Greek Junior Handball Championship held in Athens in 2008. Competitive State Anxiety Inventory-II (CSAI-II model, developed by Martens, Burton, Vealey, Bump and Smith, 1983; Martens et al., 1990; Jones & Swain, 1992), which was modified for the Greek population by Stavrou, Zervas, Kakkos & Phychoudaki (1998), was used for the collection of data.

The cognitive anxiety, state anxiety, self confidence and the direction of this state anxiety were measured on the specific instrument. The measurement instrument/scale consists of 15 items (5-items, subscales arranged on a 4-point Linkert-type scale ranging 1(none) to
4(very much) for intensity), 7-point Linkert-type bipolar scale ranging -3(hinders performance) to +3 (facilitates performance) to evaluate intensity symptoms as either deliberative or facilitative. The questionnaire was given to the players just before the warm up phase, that is, approximately 30 minutes before the starting of the game.

The Factorial Analysis, the Reliability Analysis and the one-way ANOVA analysis methods were applied for the purpose of statistical analysis of the collected data and to find out whether any of the factors were related to sex i.e. male-female and experience of the players-(a) up to 3 years (n=55) (b) 4 to 6 years (n=60). The level of statistical significance was set at p<.05. Analysis of the data on the basis of factor analysis reveals that:-

i. Three factor interpreted 57.19% of the total fluctuation on the intensity scale and three factors interpreting 61.87% of direction of intensity,

ii. The Cronbach’s alpha internal cohesion indicator of the questionnaire was satisfactory,

iii. The value of Cronbach’s alpha internal cohesion indicator was 0.79 for cognitive anxiety, 0.81 for somatic anxiety and 0.80 for the self confidence,

iv. The values of direction of anxiety were 0.84, 0.86 and 0.91 respectively,

The one-way ANOVA test revealed that:-

- There was an important differences concerning cognitive anxiety, self confidence and its direction between male and female players (F1, 114 = 9.78; p < .01, F1, 114 = 30.28; p < .001, F1, 114 = 42.05; p < .001, F1, 114 = 37.07; p < .001),
- Cognitive anxiety in male players is less as compare to female players,
- Self-confidence and its direction of male players is higher than the female players,
There were statistically important differences concerning self-confidence and its direction (F1, 114 =19.09; p<.001, F1, 114 =26.21; p<.001), between players of different years of experience,

Self-confidence and its direction, which facilitated performances, of the players with experience from 4 to 6 years are higher.

Thus, the findings of Rokka S.(2009) show that:-

- Cognitive anxiety, which facilitate performance of the players, in the male junior players were lower,
- Cognitive anxiety in the female players were higher,
- Self-confidence in junior male handball players were higher with positive effects on their performance,
- Self-confidence in female handball players was lower, which was neither facilitative nor debilitative to performance,

The players with 4 to 6 years of experience showed higher self-confidence with facilitating direction, while players with less years of experience displayed lower self-confidence, with neither facilitative nor debilitative effects on their performance.

These results are similar to the findings of Scanlan et al. (1979), Wark et al. (1979) which indicates that male players typically display lower levels of anxiety and higher self-confidence than female players.


The aim of study was to find out baseline functional health status as measured by SF-6 (veterans) and to predict new beginning symptoms or
diagnosis of post-traumatic stress disorder among deployed US military personnel with combat exposure.

For the purpose of sampling combat deployed personnel, who completed 6 baseline (2001-03) and (2004-06), were selected. To examine the relation between functional health and post-traumatic stress disorder, self reported and electronic data were used. New onset post-traumatic stress disorder as measured by either meeting the DSM-IV criteria with the 17 item post-traumatic stress disorder checklist-civilian version or self report of a physician diagnosis at follow-up with the absence of both at baseline.

The findings of the study show that:-

i. Out of the 5410 eligible participants, 395 (7.3%) had new beginning symptoms or diagnosis of post-traumatic stress disorder at the time of follow-up.

ii. Individual participants whose baseline mental or physical component summary scores were below the 15th centile had two to three times the risk of symptoms or a diagnosis of post-traumatic stress disorder by follow-up compared with those in the 15th to 85th centile. Of those with new onset symptoms or diagnosis of post-traumatic stress disorder, over half (58%) of cases occurred among participants with scores below the 15th centile at baseline.

The results of these findings show that:-

i. Mental or physical health status, which was low before the combat exposure, increases significantly the risk of symptoms or diagnosis of post-traumatic stress disorder after deployment.

ii. Members of the population, who were more vulnerable, could be identified and benefit from interventions targeted to prevent new onset post-traumatic stress disorder.
These results showing a relationship between first scores and nocturnal polysomnography and Multiple Sleep Latency Test scores have 3 potential implications:

i. The data demonstrate a characteristic that relates to vulnerability to stress-related sleep disturbance as manifested by a first night in the laboratory;

ii. The elevated latencies on the Multiple Sleep Latency Test in these individuals, despite significantly disturbed sleep, support the notion of physiologic hyper arousal in these individuals and suggests they may be predisposed to developing chronic primary insomnia;

iii. The vulnerability identified may underlie vulnerability to transient sleep disturbance associated with other sleep-disruptive factors.

**Guillén, F. & Sánchez, R. (2009).** conducted a study on the topic “Competitive anxiety in expert female athletes: sources and intensity of anxiety in National Team and First Division Spanish basketball players”.

In this study state and trait anxiety levels in the elite Spanish women basketball players were investigated and possible differences in the sources of anxiety identified between players of National team and First Division players.

For the purpose of analysis of the hypothesis 87 players, 13 among National Team and 71 among First Division players, were selected and a quantitative/qualitative design was used.

The results of the study show that:-

i. National Team members had lower State and Trait Anxiety scores as compare to the First Division players and both groups had lower scores than established population norms;
ii. The time of playing, for both groups of players, was significantly related to state and trait anxiety and those who had more minutes of playing time had lower scores;

iii. Qualitative analyses indicated that the primary sources of anxiety reported by these athletes related to personal issues pertaining to feeling physically and mentally unprepared for practice and games.


The purpose of study of Wilson, M. R., Vine, S. J. & Wood, G. (2009) was to examine the predictions of attention control theory by using the quiet eye period as an objective measure of attention control. For the purpose of analysis 10 basketball players were selected and all the players took free throws in two counter-balanced experimental conditions designed to express anxiety they felt. By using an ASL Mobile Eye tracker point of gaze was measured and by using frame by frame analysis fixation including quite eye were determined. The findings of the analysis show that:

i. There was significant reduction in an anxiety in the duration of quiet eye period and free throw success rate, thus supporting the predictions of attention control theory;

ii. Anxiety impaired goal-directed attention control (quiet eye period) at the expense of stimulus-driven control (more fixations of shorter duration to various targets). Anxiety impaired goal-directed attention control (quiet eye period) at the expense of stimulus-driven control (more fixations of shorter duration to various targets).

Thus, the findings of the analysis show that attention control theory may be a useful theoretical framework for examining the relationship between anxiety and performance in visual-motor sport skills.
Kim, K. J., Chung, J. W., Park, S. & Shin, J. T. (2009) conducted a study on the topic “Psycho-physiological stress response during competition between elite and non-elite Korean junior golfers”. The aim of study was to find out the outcomes of completion state anxiety and stress hormone on elite and non-elite junior golfer in the competition. For the purpose of the study 12 Korean junior golfers, six elite (Handicap: 2.67±0.82; 16.20±1.38 years) and 6 non-elite (Handicap: 7.83±1.17; 15.80±0.75 years) were selected. For the purpose of measuring physiological and psychological stress responses Salivary Cortisol and Competition State Anxiety Inventory-2 were used on four occasions i.e. at rest, prior to, during and after the competition respectively.

The analysis in Salivary Cortisol shows that:

i. There was no interaction between groups and the test occasions;

ii. There was significant increased levels between rest and all other occasions and between prior to and after competition between both groups of this finding is limited by the interaction with the diurnal rhythm of cortisol secretion;

iii. There was a significant interaction in the cognitive state anxiety, that is, at rest, prior to and during competition cognitive state anxiety in the elite golfers was lesser as compare to the non-elite golfers;

iv. There was no interaction found in somatic state anxiety, however, there was significant difference among occasions;

v. Somatic anxiety scores prior to and during competition was higher than after competition;

vi. There was no interaction in the self confidence, but the score of elite group was higher as compare to the non-elite group on all occasions.

Thus, the results of study demonstrate the difference of psycho-physiological response in competition between elite and non-elite golfers.
Maxwell, J. P. & Visek, A. J. (2009) conducted a study on the topic “Unsanctioned aggression in rugby union: relationships among aggressiveness, anger, athletic identity, and professionalization”. Aggressive players who intentionally cause injury to their opponents are common in many sports, particularly collision sports such as Rugby Union. Although some acts of aggression fall within the rules (sanctioned), others do not (unsanctioned), with the latter tending to be less acceptable than the former. This study attempts to identify characteristics of players who are more likely to employ unsanctioned methods in order to injure an opponent. Male Rugby Union players completed questionnaires assessing aggressiveness, anger, past aggression, professionalization, and athletic identity. Players were assigned to one of two groups based on self-reported past unsanctioned aggression. Results indicated that demographic variables (e.g., age, playing position, or level of play) were not predictive of group membership. Measures of aggressiveness and professionalization were significant predictors; high scores on both indicated a greater probability of reporting the use of unsanctioned aggressive force for the sole purpose of causing injury or pain. In addition, players who had been taught how to execute aggressive illegal plays without detection were also more likely to report using excessive force to injure an opponent. Results provide further support that highly professionalized players may be more likely to use methods outside the constitutive rules of Rugby Union in order to intentionally injure their opponents. Results are discussed within the context of the increasing win-at-all-cost attitude that is becoming more prevalent in sport and its implications for youth athletes. Copyright 2009 Wiley-Liss, Inc.

Woods, R. (2009) conducted a study on the topic “The use of aggression in primary school boys’ decisions about inclusion in and exclusion from playground football games”. The purpose of the study was to connect Psychological and Sociological literature and to seek whether social process of status formation contribute to the link between popularity and aggression identified sociometrically.
For the purpose of study three boys, aged between 8 to 10 years attending a London Primary School were selected. For the purpose of case study Socio-metric data on liking, disliking and aggression combined with ethnographic and interview data were collected.

The analysis of the data show that way in which aggression aids popularity and dominance is through boys' strategic use of aggression to enforce decisions about inclusion and exclusion in desirable activities. It can be difficult for individual boys to achieve acceptance without resorting to aggression.

The results of the study support for sociological explanation of aggression in terms of status and inclusion. It also repudiates the SIP claim that aggressive children were socially biased and incompetent.

Adie, J. W., Duda, J. L. & Ntoumanis, N. (2008) conducted a study on the topic “Achievement goals, competition appraisals, and the psychological and emotional welfare of sport participants”. Grounded in the 2x2 achievement goal framework (Elliot & McGregor, 2001), a model was tested examining the hypothesized relationships between approach and avoidance (mastery and performance) goals, challenge and threat appraisals of sport competition, and positive and negative indices of well-being (i.e., self-esteem, positive, and negative affect). A further aim was to determine the degree to which the cognitive appraisals mediated the relationship between the four achievement goals and the indicators of athletes' welfare. Finally, measurement and structural invariance was tested with respect to gender in the hypothesized model. An alternative model was also estimated specifying self-esteem as an antecedent of the four goals and cognitive appraisals. Four hundred and twenty-four team sport participants (Mage=24.25) responded to a multi-section questionnaire. Structural equation modeling analyses provided support for the hypothesized model only. Challenge and threat appraisals partially mediated the relationships observed between mastery-based goals and the well-being indicators. Lastly, the hypothesized model was found to be invariant across gender.
Berkowitz, L. (2008) conducted a study on the topic “On the consideration of automatic as well as controlled psychological processes in aggression”. Without slighting the important role played by controlled psychological processes in human aggression, this paper recommends that considerable systematic attention should also be given to the operation of automatic processes in bringing about this behavior. The concepts of automaticity and impulsivity are discussed briefly and it is proposed that many impulsive actions, particularly antisocial ones, are due to failures of restraint after they were initiated involuntarily. A number of experiments are reviewed in which situational stimuli automatically instigated or heightened aggressive inclinations. These have to do with associations in hostility displacement, reactions to stigmatized persons, and association in aggressive reactions to media violence. The last-mentioned studies deal especially with factors affecting the selection of the target for aggression. In discussing these findings it is suggested that after the crucial situational features had automatically initiated the sequence of determinants, the aggression displayed could have been due either to a hostile appraisal of the target or the activation of aggression-related bodily reactions as well as hostile ideas. It is also hypothesized that in at least one of the studies, an experienced negative affect might have instigated the aggression independently of any appraisals.

Gonzalez, B. R., Salguero, A., Tuero, C., Gonzalez-Gallego, J. & Marquez, S. (2008) conducted a study on the topic “Monitoring the effects of training load changes on stress and recovery in swimmers”. The purpose of the study was to investigate whether monitoring of stress and recovery is useful to detect overreaching in its early stages and to use this in evaluation of effects of changes in training load.

For the purpose of analysis of the hypothesis nine swimmers were selected and the Recovery-Stress Questionnaire for Athletes (RESTQ-Sport) in four different occasions (M₁, M₂, M₃, M₄) along a six week training period to the competition was applied. The study shows that:
i. Recovery scales scored higher than the stress scales during the basal training period (M₁);

ii. During second training period (M₂), in which training volume reached a maximum, there were significant increases in two stress scales i.e. injury and emotional exhaustion and decreases in the three recovery scales i.e. success, physical recovery and self-efficacy;

iii. During third and fourth training period (M₃, M₄), in which there was a decrease in training volume and training time, the values again increased and more or less same as compare to the first measure.

The finding of the study concluded the following results:

i. From period M₂ to period M₄ recovery scale score (success) increases;

ii. There was a significant decrease in the recovery-stress state (i.e. total recovery- total stress) in the M₂ period and its values progressively increased in measures M₃ and M₄ but with no significant difference from period M₁.

These results indicate that the RESTQ-Sport is able to show significant changes concurrently with training loads.

On the basis of these results it is concluded that regular monitoring of stress and recovery by these measures may help to detect overreaching in its early stages.

Agawa, H.et al. (2008) conducted a study on the topic “Changes of mental stress biomarkers in ultra marathon”. The purpose of the study was to find out the changes of mental stress biomarkers in Ultra-Marathon, that is the possible affect of tired physical exercise on the bio-markers i.e. serotonin, tryptophan, and beta-endorphin along with dopamine, noradrenalin and free fatty acids in an Ultra-Marathon race, in which 45 km. was run on the first day and 90 km. on the second day. For the purpose of analysis serum samples from 18 Japanese male runners, who completed the
Marathon, at 6 different time points during and after the race, have been taken.

For the analysis of the data ANOVA test was applied. The findings of the study show that:

- There were significant overall change of serum serotonin and tryptophan concentrations for repeated measurement (p<0.05);
- Tryptophan concentration inversely decreased during the race, possibly due to utilization for synthesis of serotonin;
- Levels of beta-endorphin appeared to increase on the first and second day of the race but were not significant statistically.

Thus, findings of the study concluded that serum serotonin, tryptophan and beta-endorphin worked as stress markers in the physical exercise.

**Kristiansen, E., Roberts, G. C. & Abrahamsen, F. E. (2008)** conducted a study on the topic “Achievement involvement and stress coping in elite wrestling”. The aim of study was to determine the relationship between task involvement and coping with stress in the elite competition. For the purpose of collection of data 82 elite wrestlers, 60 male and 22 female from four different European countries and between age group of 16-37 years, were selected. The data were collected for over 18 months and during this period qualitative in depth interviews (n=6) were conducted and quantitative approaches were used. For quantitative study were applied achievement goal orientation [Perception of Success Questionnaire], perceptions of the motivational climate [Perceived Motivational Climate in Sport Questionnaire] and coping strategies (Brief COPE). The qualitative part explored motivation and coping in depth.

The analysis of the data shows that wrestlers, which were involved in task copied better in the competitive situation because of their use of more adaptive coping strategies, both the problem-focused and emotion-focused strategies in competition.

The aim of study was to examine the relationship between motivation, social support and performance anxiety with handball players.

For the purpose of collection of data 143 handball players, 74 male and 69 female, from 10 elite handball teams were selected and Achievement Goal Theory Test was applied. Three hypotheses were taken in this study and the following results were found out:

i. It was predicted that the female athletes would report more performance worries and more social support use than male. While the findings support the hypothesis for anxiety, but not for social support. However, it was reported by female that they felt more available social support as compare to males;

ii. It was predicted and found that there was a positive relationship between the interaction of ego orientation and perception of a performance anxiety but only for females;

iii. It was predicted that perceptions of a performance climate were related to the view that social support was less available especially for the male athletes. This prediction is supported by Simple Correlation; however the regression analysis did not reach significance.

Thus, mediation of social support could not be tested between motivational variables and anxiety. These results describe that fostering a mastery climate helps elite athletes tackle competitive pressure.

Polman, R., Rowcliffe, N., Borkoles, E. & Levy, A. (2007) conducted a study on the topic “Precompetitive state anxiety, objective and subjective performance, and causal attributions in competitive swimmers”. This study investigated the nature of the relationship between
precompetitive state anxiety (CSAI-2C), subjective (race position) and objective (satisfaction) performance outcomes, and self-rated causal attributions (CDS-IIC) for performance in competitive child swimmers. Race position, subjective satisfaction, self-confidence, and, to a lesser extent, cognitive state anxiety (but not somatic state anxiety) were associated with the attributions provided by the children for their swimming performance. The study partially supported the self-serving bias hypothesis; winners used the ego-enhancing attributional strategy, but the losers did not use an ego-protecting attributional style. Age but not gender appeared to influence the attributions provided in achievement situations.

Agnieszka Wlazło, Milena Szuszkiewicz & Edward Wlazło (2007) conducted a study on the topic “Self-agression in athletes practicing combat sports”. The purpose of study was to determine the level of aggression related variables especially of self aggression, in the combat sports athletes. For the purpose collection of data four groups of athletes, 27 Boxers, 22 Judaists, 21 Karate athletes and 22 Ju-Jitsu athletes, between age groups of 20 to 24 years and with 5 to 8 years of training experience, were selected.

For the analysis of the collected data Psychological Inventory of Aggression Syndrome (PIAS) questionnaire test and Mann &Whitney U-test were applied.

Findings of the study show that:

i. As compare to the other groups, aggression control was lower and self aggression was higher in the Boxers;

ii. In Ju-Jitsu externalized aggression was lower as compare to Karate athletes;

iii. In Ju-Jitsu athletes emotional self aggression was lower as compare to boxers and Karate athletes.

The findings of the study concluded that differences in aggression-related variables between athletes practicing various combat sports may be
due to diverse philosophical and ethical principles in those sports as well as motivations for those sports.

Thomas, S., Reeves, C. & Smith, A. (2006) conducted a study on the topic. “English soccer teams aggressive behavior when playing away from home”. The aim of study was to find out aggressive behaviour amongst English Soccer players and its relation to advantage. Aggressive behavior’s identified by the award of a penalty or disciplinary card as, yellow for caution and red for dismissal. For the purpose of analysis of data chi-square analysis was used and assessment was made whether a greater frequency of aggressive bahaviour was performed by teams away from home.

The analysis of data shows that:

1. In decided matches, teams playing away received significantly more cautions (yellow cards) than home teams;

2. In tied matches, away teams received significantly more cautions (yellow cards) than home teams;

3. There were no significant differences between home and away teams were found for dismissals and penalties awarded;

Reasons for these findings are considered.

Bekiar, i A., Patsiaouras, A., Kokaridas, D. & Sakellariou, K. (2006) conducted a study on the topic “Verbal aggressiveness and state anxiety of volleyball players and coaches”. The purpose of this study was to investigate the relationship between verbal aggressiveness and state anxiety (somatic, cognitive and self confidence) in sports settings based on the ratings by volleyball coaches and their players.

For the purpose of collection of data 208 volleyball players; 98 men and 110 women and 20 their coaches, 16 men and 4 women were selected.

Analysis of data showed that:
1. Somatic anxiety in the male volleyball players is higher as compare to female players;

2. Male volleyball players were more affected by the verbal aggressiveness of their coaches as compare to female volleyball players;

3. Mean differences for male and female coaches on somatic anxiety or cognitive anxiety, self-confidence or verbal aggressiveness were not significant;

4. The correlations between verbal aggressiveness and self-confidence and anxiety were positive for these volleyball players, leading them to better behaviour.

The purpose of the study of Neil (2006) was to seek intensity and direction of competitive anxiety symptoms and psychological skill usage in players of Rugby union, of different skills.

For the purpose of analysis 65 elite and 50 non-elite subjects were selected. These participants completed measures of competitive anxiety, self-confidence and psychological skills. Findings of the study show that:

1. The elite group reported more facilitative interpretation of competitive anxiety symptoms as compare to the non-elite group;
2. The elite group reported higher levels of self-confidence and lower relaxation usage as compare to the non-elite group.
3. The elite group reported greater imagery and self-task use as compare to the non-elite group.

The finding of the study made the following suggestions:

1. Non-elite performers primarily use relaxation strategies to reduce intensity of anxiety;
2. Elite performers appear to maintain intensity levels of anxiety and adopt a combination of skills to interpret symptoms as facilitative to performance;

3. Potential mechanisms for this process include the use of imagery and verbal persuasion efficacy-enhancement techniques to protect against debilitating symptom interpretations.

**The purpose of the study of Rikard and Banville (2006)** was to analyze the attitudes of high school students toward fitness and sports activities taught in physical education, and the perceived effectiveness of their physical education curriculum for improving their fitness and skill levels. For the purpose of study students from six high schools and 17 intact physical education classes and data were collected by using a questionnaire, which were completed by 515 students, 159 of whom participated in focus group interviews.

The findings of the study show that:

1. Students preference for a wider variety in sport and fitness activities;
2. An increase in level of challenge in physical education classes;
3. An increase in students’ motivation for participating in activities outside of school.

Due to known health benefits students’ attitudes were accepting or tolerant towards participation in fitness activities. Most students liked physical education class that included some form of game play. Besides this, these students stressed the need for adding interesting activities that included active participation while having fun. Students’ recommendations included strategies for improving instruction and for grouping students by skill levels for appropriate challenge.
Drake, C., Richardson G., Roehrs T., Scofield, H. & Roth, T. (2004) conducted a study on the topic “Vulnerability to stress-related sleep disturbance and hyper arousal”. The purpose of study was to analyse the presence of a hypothesized trait vulnerability to sleep disturbance and hyper arousal.

For the purpose of study 104 individuals, 46% men among them and between the age group of 40.4±12.90 years, have been selected and polysomnographic assessment of sleep in response to stress during a first night in the laboratory on selected individual have been analysed and subsequent physiologic arousal also studied.

For the assessment of sleep disturbance in response to commonly experienced stressful situations, Linkert-Scale questionnaire, consisting of 27 items, were given to the selected individuals. Factor-Analysis techniques, which identified a single 9-items factor that was representative of the construct of “stress-related” vulnerability to sleep disturbance, was also applied for the analysis of the data. The analysis of data shows that:

1. Reliability of the resulting 9-items scale was high(Cronbach alpha =.83), which shows that individuals with higher Cronbach’s alpha, had a lower sleep efficiency (P=.001);
2. Individuals with higher Cronbach’s alpha had an increased latency to stage-1 sleep (P=.001) on the first night of nocturnal polysomnography;
3. Individual with higher Cronbach’s alpha showed increased arousal as compare to individual with lower Cronbach’s alpha which is evidenced by elevated sleep latency on the Multiple Sleep Latency Test;
4. The difference between individuals with higher Cronbach’s alpha on the first stage in terms of nocturnal sleep and day time arousal remained significant, after the controlling current and past insomnia;
5. Other stages of sleep, that is stage-2, slow wave sleep and rapid eye movement sleep, were not different between the individuals with high Cronbach’s alpha and low Cronbach’s alpha.

The aim of study of Humara (2004) was to determine the relationship between anxiety and performance from a behavioral perspective. Previous research, in this direction, has advised that the majority of consultations conducted by the sports psychologists are related to the anxiety while theoretical underpinnings of anxiety and its relation to the performance was examined and research conducted on the relationship between anxiety and performance was also discussed. Besides this a review of the cognitive-behavioral treatments that have been used for anxiety reduction and performance enhancement within the field of athletics is included. Suggestions for future research and practical considerations are listed in the conclusion.

Kais, K. & Raudsepp, L. (2004) conducted a study on the topic “Cognitive and somatic anxiety and self-confidence in athletic performance of beach volleyball”. The purpose of this study was to find out the influence of competitive anxiety and self-confidence upon the performance of athletes’. For the purpose of study 66 male beach volleyball players were selected and modified Competitive State Anxiety Inventory-2 Test, which included the original intensity scale and a direction scale of Jones and Swain, was applied. The performance of the players’ was scored from video records by using standard rating scales.

Findings of the study show that:

1. Correlations indicated scores on Direction subscale of modified Competitive State Anxiety Inventory-2 and Self-confidence were moderately positively (r=.27 to .51) correlated with different skill components and sum of skill components of beach volleyball;
2. Stepwise multiple regressions indicated that, as anticipated, directional perceptions of cognitive and somatic anxiety and self-confidence were significant predictors of beach volleyball performance but accounted for only 42% of variance;  
3. Original Intensity subscales of somatic and cognitive anxiety did not predict performance.

Thus, these findings support that direction of anxiety responses must be taken into consideration when examining anxiety-performance association in sport.

Yoo, J. (2003) conducted a study on the topic “Motivational climate and perceived competence in anxiety and tennis performance”. The purpose of study was to verify a prediction in the achievement goal-orientation theory in the Korean physical education setting. For the purpose of study it was hypothesized that the interactions of situational induced motivational climate and perceived competence would differentially influence anxiety and performance in the tennis classes. For the purpose of analysis of the hypothesis 60 undergraduate male were selected and they were assigned for 6 week to a Task-involving and an Ego-involving program in tennis classes for 6 week. After first 3 week the perceptions of these male of motivation climates and tennis competence were measured and responses of cognitive & somatic anxiety and skill performance were also examined over the second and third week of the classes.

Findings of the analysis show that:

1. Anxiety responses of these students deceased in the task involving condition while their tennis performance increased;  
2. Ego-involving students’ maintained their anxiety responses while their tennis performance decreased.
Thus, these results of above findings support the hypothesis and suggested practical application of the goal-orientation theory in Korea could be explored.

Beck (2002) emphasized in his study as intercollegiate players continue to grow; the pressure placed on athletes to win intensifies. The aim of the study was to find out how state cognitive anxiety levels of Division-I College athletes by incumbent and new head coaches.

For the purpose of the study 201 returning Varsity athletes with incumbent head coaches from three south-eastern NCAA Division-I conferences and 54 returning Division I varsity athletes from five teams that experienced a head coaching change were selected. For the purpose of the study sport teams of basketball, golf, lacrosse, soccer, swimming/diving, tennis, and volleyball were selected. 48 males and 207 female, between age group of 18-23 years, were incorporated for the purpose of study. The study included players of second; third, fourth and fifth year of playing eligibility and Collegiate Athletic State Cognitive Anxiety Survey (CASCAS) of the players was conducted. For the purpose of statistical analysis items of the study were categorized into four different groups and state cognitive anxiety, scholarship, coaching relations, competition and performance were analysed.

The findings of the study reveal that:

1. There was no statistical significance found between players who experienced incumbent versus new head coaching changes in the four categories;

2. There was statistical significance found between team sport players (m=1.43, SD=2.60) as compared to individual sport players (M=2.67, SD=2.14, t (220) = 3.10, p <.50) in term of scholarship;
3. Statistically significant differences were also found between females (M=2.34, SD=1.86) and males (M=1.70, SD=1.62, t (207) = -2.21, p<.50) in the competition and performance category;

4. there was statistically significant negative relationship between length of time athlete participated in these sports overall anxiety (r = -.13, p<.50), scholarship (r = -.14, p<.05);

5. Caucasians (M=2.01, SD=1.44) possessed statistically significant differences in overall state cognitive anxiety level as compared to African Americans (M=1.43,SD=1.31), t (163)=2.64, p<.05);

6. There was a statistically significant negative relationship was discovered between state cognitive anxiety levels and relationship in overall state cognitive anxiety (r=-.26, p<.05).

Findings of the study make the conclusions that Student / players were continuously evolving due to new experiences and exposures to intercollegiate athletics. Although the study found no statistically significant differences between the two groups, further investigation in this area is warranted. Coaches and administrators can utilize the findings to improve the athletic environment and better understand the concerns that student-players face each year.


The aim of study was to find out the differences of stress in the elite tennis players under practice and tournament conditions. For the purpose of study
28 national level players (NR) were selected and their pre- and post-competition urine samples were collected for the analysis of concentrations of epinephrine (EPI) and non-epinephrine (NE) under practice (P) and tournament conditions (T). For the purpose of analysis the values obtained from two internationally ranked players (IR) competing in 6 (player A) and 5 (player B) Davis-Cup matches, respectively were collected. The findings of study show that:

1. The pre and post competition concentrations for epinephrine (EPI) in national level players (NR), were significantly higher under tournament conditions (T: 1.33±0.65 and 3.66±2.51 micro g/100 mg creatinine vs P: 0.61±0.39 and 0.97±0.59 micro g/100 mg creatinine);

2. The ratio of non-epinephrine (NE) and epinephrine (EPI) was significantly inverse (T: 3.53±1.87 and 3.58±1.59 vs P: 8.08±6.99 and 10.03±6.58);

3. The pre and post competition concentrations for non-epinephrine (NE) in national level players (NR), did not differ;

4. There were significant correlations between the level of perceived nervousness (ten-point-Likert scale) and the post competition concentration of EPI (r=0.491, p<0.05) and the NE/EPI ratio (r= -0.595, p<0.01);

5. There were significant lower ratios of non-epinephrine (NE) and epinephrine (EPI) (2.73±1.44 vs 4.49±2.54, p<0.05) in the players who felt affected by nervousness in their performance outcome;

6. The intra-individuality of the Davis Cup Players were found to be constant but inter individually different concentrations of epinephrine (EPI) (A= 2.2±0.5 vs B= 7.0±0.8 micro g/100 mg creatinine), NE (A= 7.4±2.2 vs B= 15.5±3.2 micro g/100 mg creatinine) and the ratio of NE/EPI (A= 3.7±2.2 vs B= 2.2±0.7).

The findings of the study made the following conclusions:

1. Due to higher psychological stress, in the tennis tournament sympathetic activity increased, which impair the performance of the player;
2. Psycho-regulative methods and psychological regeneration for players dealing with a chromic sympathetic hyper-activation should be focused by the practical efforts.

The main purpose of Jones and et al. (2001) study was to extend present sport psychological research by developing a more comprehensive athlete attitudinal survey. For the purpose of study 274 students athletes of Midwestern University were selected and a multiple item survey, consisting of questions related to attitude, was conducted. These items of the survey were related to the 6 interpretable factors: competitiveness, team orientation, mental toughness, emotional control, positive attitude, and safety consciousness. The findings of the study show that:

1. SPI composite of college athletes were found to be higher as compare to the novice athletes;
2. Attitudes of college athletes were found to be more positive as compare to the novice athletes;
3. College athletes were found to be more competitive as compare to the novice athletes;
4. Team orientation of female were more as compare to the males;
5. Novice males were found to be more competitive as compare to the novice females;
6. College females were found to be more competitive as compare to the college males.

Cockshott et. al. (2001) supported the relationship between the kind of achievement goals established and related competitive anxiety (Ntoumanis et. al. 1997). This dissertation thesis explores the relationship between achievement goal orientations and various competitive anxiety coping strategies and results in the construction and evaluation of a model designed to clarify relationship among achievement-related cognitions, coping strategies and competitive state
anxiety. Participants (N=247) in the study were ranked and unranked junior tennis players competing in regional tennis tournaments in the south-eastern United States. Participants (137 males, 110 females) completed questionnaires designed to measure goal orientation, trait anxiety, perceived ability, self-efficacy, task difficulty, motivational climate, coping strategies and state anxiety. Internal consistency estimates for the questionnaires ranged from .71 to .94.

Following a confirmatory factor analysis a hypothesized model suggesting the relationship among all variables was tested using structural equation modelling (SEM) for latent variables. The hypothesized model was consistent with the data as the overall chi-square was determined to be 581.1, with 347 degree of freedom. Direct determinants of the intensity were found to have a significant influence on the direction of competitive state anxiety. Task orientation and perceived ability were found to have indirect effects on the direction of competitive state anxiety through the use of problem-focused coping. Increases in the use of problem-focused coping strategies led to more facilitative interpretations of anxiety, while emotion-focused coping strategies led to more debilitating interpretations of competitive state anxiety. Trait anxiety was found to have a significant indirect effect on the direction of competitive state anxiety, through the use of emotion focused coping strategies and appraisal.

The result from this study suggest that tennis players can develop facilitative interpretation of anxiety by striving towards goal attainment and engaging the coping strategies of active coping planning, suppression of emotion and seeking social support for instrumental reasons.

Baker, J., Cote, J. & Hawes, R. (2000) conducted a study on the topic “The relationship between coaching behaviour and sport anxiety in athletes”. The purpose of study was to examine the influences of coaches on various sports outcomes i.e. performance and dropout because coach is an influential element of the competitive experience. For the purpose of study
228 athletes from 15 sports were selected and Sport Anxiety Scale (SAS) and coaching behaviour scale for sport (CBS-S) tests were conducted. With the help of these tests the predictive ability of athletes' perceived frequency of seven coaching behaviours (physical training, mental preparation, goal setting, technical skills, competition strategies, personal rapport and negative personal rapport) on four forms of sport anxiety (total anxiety, somatic anxiety, concentration disruption and worry) was examined. The findings of the study show that:

1. There was a negative personal rapport, which is a predictor of all measured forms of sport anxiety;

2. There were competition strategies, which is a significant predictor for total anxiety, concentration disruption and worry.

These findings suggest that negative rapport between coach and athlete is an important contributor to athlete anxiety while the behaviour that the coach demonstrates relative to competition can be influential in reducing athlete anxiety.

_Kirker, B., Tenenbaum, G. & Mattson, J. (2000)._ conducted a study on the topic. “An investigation of the dynamics of aggression: direct observations in ice hockey and basketball”. The aim of the study was to construct a theoretically coherent and ecologically valid framework for research on processes underlying sports aggression and to make contribution in area of the knowledge. For the purpose of analysis of computer observational analysis used as primary research method along with complementary questionnaires and personal reflections, considered aggression in two sports like: ice-hockey and basketball. Collected data were classified by involved and independent experts relative to the factors and behaviours associated with sports aggression. The findings of the study show that:

1. Two-thirds of time aggression was instrumental in nature;
2. According to the game circumstances, aggressive acts typically occurred in clusters and varied frequency;

3. Multiple variables and aggression theories were related to severely aggressive acts.

Misra (2000) has conducted a study to compare stressors and reactions to stressors of male and female students. In the study, he concluded that the students experienced highest stress levels due to pressure, followed by self-imposed stress. Females experienced higher stress than males due to frustration, self-imposed stress and pressure.

Ommundsen, Y. & Roberts, G. C. (1999) conducted a study on the topic “Effect of motivational climate profiles on motivational indices in team sport”. The aim of study was to examine the relationship between different profiles of the motivational climate and achievement among Norwegian athletes. For the purpose of study 148 Norwegian players were selected and sources of satisfaction in team sport, achievement strategies, perceived purposes of sport and conceptions questionnaire were used for the assessment of the perceptions of these players. Findings of the study give the results:

1. Athletes perceiving the climate as high in mastery and high in performance oriented criteria reported psychological responses that were more adaptative as compare to those perceiving the climate as low in mastery and high in performance criteria;

2. Athletes perceiving high in mastery and low in performance were more likely to emphasize self-referenced criteria when judging perceived ability in team sport.

For both social responsibility and lifetime skills as purposes in sport, it was the high performance and low mastery athletes who were least likely to endorse these purposes. And importantly, the high mastery climate
seemed to moderate the impact of being in a high performance climate. The pattern of findings suggests that perceiving the motivational climate as performance oriented may not be motivationally maladaptive when accompanied by mastery oriented situational cues.

**Digelidis, N. & Papaioannou, A. (1999)** conducted a study on the topic “Age-group differences in intrinsic motivation, goal orientations and perceptions of athletic competence, physical appearance and motivational climate in Greek physical education”. The purpose of the study was to examine age group differences in students’ motivation, self-perceptions, task and ego orientations and perception of motivational climate in the lessons of Greek physical education. For the purpose of study 674 students, of age between 10-17 years, were selected. Findings of the study show that:

1. The students of senior high school scored lower on the scales assessing intrinsic motivation, perceived learning orientation in the lesson, task orientation and perceived athletic ability as compare to the students of junior high school and elementary level;

2. The students of high school had lower scores on the perceived physical appearance scale and higher scores on the measure assessing perceptions of students’ worries about mistakes as compare to the students of elementary school.

These findings suggest that learning orientation should be strengthened in Greek physical education.

**Griffith, Steel and Vaccaro (1999)** examined the relationship between the anxiety level and performance of 62 beginning Scuba diving students and standardization that there was no relationship between anxiety and performance on relatively simple cost, while there was a
relationship between anxiety and performance on the more complex diving manoeuvres.

**Pedersen, B. H. & Ommundsen, Y. (1999)** conducted a study on the topic “The role of achievement goal orientations and perceived ability upon somatic and cognitive indices of sport competition trait anxiety: A study of young athletes”. The aim of the study was to examine the relationship between achievement goals and indices of somatic and cognitive trait sport competition anxiety between young athletes. For the purpose of study 136 young athletes of north Norway, between the age group of 13 to 18 years were selected and for analysis of data Goal orientation theory and competence motivation were used. Findings of the study show that there was no relationship between achievement goal orientations and somatic & cognitive indices of trait sport competition anxiety. The findings of the study suggest that in order to prevent sport competitions and giving rise to the elevated cognitive anxiety in young athletes, they should be task oriented as well as having a sense of being competent.

The aim of **Greenblatt, S.Shavasana (1999)** study was to examine relationship between meditation and stress and also to examine healthful effects of meditation and stress. The relative importance of different aspects (like length and frequency of meditation) of meditation practice was also assessed by this study. For the purpose of study 180 people from the meditation centres around the US, practicing meditation, similar to mindfulness meditation were selected and self reports measures on meditation habits were completed by them. For the purpose of analysis weekly stress inventory (WSI) and the short form 36 weeks survey were conducted. Two weeks after initial data collection, WSI (weekly stress inventory) and the meditation questionnaire were re-administered to examine causality between meditations and stress reactivity. Data were collected primarily via internet. The analysis of data shows that:

1. The first path analysis compared two models differing only on the causal direction of the path between stress reactivity
and recent meditation. The model positing recent meditation influencing stress reactivity provided a better fit to the data than the model positing stress reactivity influencing meditation practice;

2. Meditation’s influence on stress reactivity to provide a better fit to the data than the alternative model;

3. There were a strong negative association between stress reactivity and health;

4. Frequency of meditation was as important to stress reactivity as hours meditated;

5. Recent meditation was associated with emotional health, vitality, and stress reactivity, whereas lifetime meditation experience was relatively unimportant.

**Griffith (1999)** The purpose of study was to examine detrimental effect of aggression on individual who play game like video game. Griffith reviews the empirical studies in this area, including research methodologies such as the observation of free play, self-report methods, and experimental studies. Findings of the study show that:

1. Previous findings on video game violence have methodological problems and that they only include possible short term measures of aggressive consequences;

2. Young children do become more aggressive after either playing or watching a violent video game.

**Ntoumanis, N. & Biddle, S. (1998)** conducted a study on the topic “The relationship between achievement goal profile groups and perceptions of motivational climates in sport”. The purpose of study was to examine which combinations goal orientations are compatible with perceptions of mastery and performance climates on 146 students of British University. The findings of the study show that:

1. Students with high scores in task orientation (irrespective of degree of their ego orientation) perceived the climate as more
mastery-oriented as compare to those with low scores in the task orientation;

2. There were a large differences in effect sizes between the high and low task groups;

3. The most negative perceptions of climate were held by those who were rated both low in task orientation and high in ego orientation.

These findings give a general inference that high task orientation was motivationally adaptive high orientation was not harmful as long as it was accompanied by a high task orientation. These findings are contradictory to the previous research that the enhancement of the task orientation with the suppression of ego orientation.

Thus, these results are consonant with studies which have employed a goal profit analysis in sport and physical education.

**Hall, Kerr and Mathews (1998)** able to operationally and measure such changes independently. Accordingly, the symposium will describe a multi measure approach to the examination of in event performance, based on these theoretical perspectives which appear to offer a great deal to our understanding of how, as opposed to when, anxiety affects performance.

**Chapman, C., Lane, A. M., Brierley, J. H. & Terry, P. C. (1997)** conducted a study on the topic “Anxiety, self-confidence and performance in Tae Kwon-Do”. For the purpose of study 142 male Taekwon-do players were selected and competitive State Anxiety Inventory-2 completed. Multivariate in analysis of variance was determined. The findings of study show that:

1. Winners reported lower cognitive/somatic anxiety and higher self confidence as compare to the losers;

2. On the basis of their pre-competition competitive state anxiety inventory-2 scores, discriminant function analysis
showed that 89(62.60%) players could be correctly classified as winners or losers.

**Thomassen, T. O. & Halvari, H. (1996)** conducted a study on the topic “Achievement motivation and involvement in sport competitions”. For the purpose of study 213 students were tested on the motive to achieve success, to avoid failure, future time orientation, perceived instrumentality of physical tasks at school and the involvement in sport competitions. The analysis of the study shows that:

1. There was a significant positive correlation between the scores on motive to achieve success and the amounts of competitive involvement in sports;
2. There was a significant negative correlation between the motive to avoid failure and the involvement in sports;
3. There was a significant positive correlation between the involvement in sport competitions and perceived instrumentality of physical or sport tasks;
4. These relations were similar for both male and female students.

The findings of the study give the result that all independent variables affected involvement in sport competition directly or indirectly.

**Terry, P. C., Cox, J. A., Lane, A. M. & Karageorghis, C. I. (1996)** conducted a study on the topic “Measures of anxiety among tennis players in singles and doubles match”. The purpose of the study was to examine anxiety among tennis players in the singles and doubles matches. For this purpose 100 tennis players, comprising male and female, were selected and before playing single and double matches the Competitive State Anxiety Inventory-2 was conducted about one an hour. Multivariate analysis of variance of anxiety and self confidence responses were determined. Findings of the study show that:
1. Single match winner had significantly lower cognitive anxiety and higher self-confidence as compare to losers;

2. Doubles match winner had significantly higher self-confidence score as compare to losers;

Discriminant function analysis show that results of 72% of single matches and 70% of doubles matches could be correctly classified from responses to the pre-competition measures. Anxiety responses and playing condition indicated that irrespective of the outcomes of the matches' score of cognitive/state anxiety was higher while score of self confidence was lower before playing singles matches as compare to doubles matches.

These results suggest that pre-competition scores on measures of anxiety provide significant indicators of performance in tennis but that responses vary for singles and doubles play.

Lavallee, L. & Flint, F. (1996) conducted a study on the topic “The Relationship of Stress, Competitive Anxiety, Mood State, and Social Support to Athletic Injury”. The aim of study was to examine the relationship of stress, competitive anxiety, mood state and social support to athletic injury. For this purpose it was hypothesised that greater incidence of injury was shown by the athletes with high levels of stress, high competitive trait anxiety, negative mood state and low social support.

For the purpose of analysis of the hypothesis 55 University athletes, from Football and Rugby (42 players from Football and 13 players from Rugby), between the age group of 19-28 years, were voluntarily selected. For the collection of the data and analysis of the hypothesis the Inventory Sport Competition Anxiety Test (SCAT), Social Support Scale, Social Athletic Readjustment Rating Scale (SARRS), and Profile of Mood States (POMS) were conducted. The self report measures internal consistency was tested using Cronbach's alpha coefficient. The rate of injury and severity examined by the head student therapist. For the analysis of the data
correlation analysis was performed by using Pearson correlation coefficient. The findings of the study show that:

1. Competition anxiety (r=.29, p=.03) and tension/anxiety mood state (r=.43, p=.001) were related to the injury frequency;
2. Tension/anxiety (r=.44, p=.008) anger/hostility (r=.30, p=.02) and total negative mood state (r=.28, p=.038) were related to the injury severity.

Two sports, individually give different results- for Football, injury frequency and injury severity were related to tension/anxiety (r=.43, p=.004 and r=.47, p=.002 respectively). Vigor/activity was found to be significantly related to the injury rate (p=.02) but since the internal consistency of Vigor/activity was less than .70 on the Cronbach's alpha scale while in rugby injury frequency was related to tension/anxiety (r=.58, p=.04) and depression/dejection (r=.57, p=.04).

These results of the study are very useful for athletic trainers in determining athletes possessing psychological factors predisposing them to injury.

**Lynn and Frances (1996)** The aim of study was to determine the role of stress, competitive anxiety, mood state and social support in athletic injury. For the purpose of study it was hypothesised that greater incidence of injury and severe injury occurred in the athletes having high level of stress, high competitive trait anxiety, negative mood state and low social support. For the purpose of the analysis of hypothesis 55 male players of the University, between the age group of 19-28 years were selected and Sport Competition Anxiety Test (SCAT), Social Support Scale, Social Athletic Readjustment Rating Scale (SARRS), and Profile of Mood States (POMS) were administered. With the help of Cronbach's alpha coefficient internal consistency of the self-report measures was tested. Findings of the study show that:
1. Competitive anxiety (r=.29, p=.03) and tension/anxiety mood state (r=.43, p=.001) were related to the injury frequency;
2. Tension/anxiety (r=.44, p=.008), anger/hostility (r=.30, p=.02) and total negative mood state (r=.28, p=.038) were related to injury severity.

**Das (1996)** conducted a study to determine attitude of fresher’s towards physical education in L.N.I.P.E. The study was to assess the degree of liking and disliking of Fresher’s towards the physical education. The study was also reveal modification in physical education programs, if any.

Students of first year degree course of the institute were selected as subjects. A questionnaire consists of thirty six questions was administered and hundred numbers of responses was received by the author.

Percentage analysis was done for assessing the background of the subjects. The chi-square statistics was applied, keeping the level of confidence at .01, to find out the attitude.

The research found that majority of the respondents recognized the importance of physical education. The subjects were also of the opinion that only physically fit person selects this profession. They also agreed that to pursue this course they had to give up what they would have liked to do.

**Knop, Theeboom, Wittock & Martelaer (1996)** The purpose of study was to determine relationship between sports and young Muslim women in the West European Countries. Before the study it was revealed that relationship between sports and young Muslim female of Western Europe was problematic. Therefore, special attention must need for this topic. Research in this direction has indicated that attitude of most of young Muslim female were positive towards sports while their actual participation in the sports were very low as compare to other youngsters. This is due to the reason that in the Islamic living rules, especially related to the female, sports participation is totally restricted. However, some authors are of the
view that Islam does not prohibit female participation in the sports. This study provides more insight about the relationship of Islam and participation of young Muslim girls in the sports in the West European Countries and gives some recommendations to make policy for promotion of sports in the Muslim girls.

**Ravneet (1995)** conducted study on 120 sportsmen/women of post-graduation. Among sports men and women she took males and females belonging to judo, gymnastics, cricket, badminton and basketball games. She found significant difference in sports women and non-sports women where sports women are more aggressive. There was no difference in sportsmen and non-sportsmen whereas sportsmen were more aggressive than sportswomen and non-sportsmen were found more aggressive than non-sportswomen. The participants of Judo, Gymnastics were more aggressive than individuals played Cricket, Basketball and Badminton.

**Harry(1995)** The present work tests the associations of sports ideology with sexist and anti-homosexual attitudes in a sample of 304 college students. It was found that sports ideology is positively associated with sexist and anti-homosexual attitudes, but only among males. Among females only sexist attitudes were associated with negative attitudes toward gays and lesbians. Among males, the link of sports ideology to anti-homosexual attitudes was independent of sexist beliefs. Reciprocal casual influences between sexist attitudes and sports ideology are discussed.

Korean National athletes and coaches showed a favorable attitude towards athletic participation while recognizing the value of participation like general, social and moral and self-concept and character development. The study also shows that Korean female athletes had more favorable attitude than their male counterparts. She study also revealed that the Korean national coaches have more favorable attitude towards athletics participation than do athletes (Nov.1991).

**Lefmgwell and Williams (1995)** tested the predictive validity and discriminate validity of the Sport Anxiety Scale (SAS) and compared the
SAS to the SCAT in predicting dimensional state anxiety, as measured by the CSAI-2. Two separate samples were investigated (1) 36 male and female (n = 18 for each) junior college cross country runners and (2) 35 female (n=20) and female (n=15) college students enrolled in an intermediate tennis class. The results from sample 1 indicated good discriminate validity for the somatic subscale. Results in sample 2 demonstrated an opposite effect. In both samples, compared to the SCAT the appropriate subscale of the SAS correlated slightly higher with the appropriate state anxiety subscale, although the differences in the correlations were not significant. The results of this study suggest future research is needed regarding the discriminate validity of the SAS and before discarding the SCAT in favour of the SAS.

**Terry, P. C., & Slade, A. (1995** conducted a study on the topic “Discriminant effectiveness of psychological state measures in predicting performance outcome in karate competition”. For this purpose 208 male karate players were selected. The Competitive State Anxiety Inventory-2 and Profile of Mood State Tests were conducted for about 40 minutes before a competition. Single factor multivariate analysis of variance of pre-performance mood and anxiety scores shows that:

1. There was a significant difference between winning and losing competitors;

2. Winners scored higher on vigor, anger and self-confidence and lower on tension, depression, fatigue, confusion, cognitive anxiety and somatic anxiety.

Discriminant function analysis show that on the basis of pre-performances mood scores 91.96% participants could be correctly classified as winners or losers while this score included on anxiety sub-scale the percentage increased to 93.47%. scores of anxiety alone produced 78.89% discrimination. Mood profiles for winning karate were in line with the "mental health" profile of Morgan except for above-average scores on Anger.
These findings support the results of McGowan and Miller that anger may stimulate performance in the karate competition.

Radha (1995) studied the selected psychological variable namely anxiety, aggression, motivation and personality traits in relation to basketball performance. If psychological factors, aggression is highly correlated with the playing ability ($r = .941$) further, it is noted that the coefficient of multiple correlation ($r = .981$) revealed that psychological factor put together play an important role in the basketball performance.

Jones & Graham (1995) conducted a study on the topic “More than just a game: Research developments and issues in competitive anxiety in sport”. Discusses the relationship between anxiety (AN) and performance (P) in competitive sports. The general arousal and AN theories include the Drive theory, inverted-U hypothesis, reversal theory, and state and competitive trait AN theories. Research shows that AN can be conceptualized as multidimensional, comprising cognitive and somatic components. Antecedents of cognitive AN relate to the athlete's expectations of success, and antecedents of somatic anxiety consist mainly of conditioned responses to stimuli. Temporal patterning of AN distinguishes between successful and less successful, and experienced and less experienced performers. The amount of time which cognitions about specific competitive events occupy a performer's mind relate to pre-competition AN. AN can both debilitate and facilitate P. However, catastrophe models state that P drops in a sudden and dramatic way when arousal reaches beyond the optimal level. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

Wong, E. H., Lox, C. L. & Clark, S. E. (1993) conducted a study on the topic “Relation between sports context, competitive trait anxiety, perceived ability, and self-presentation confidence”. This study examined the relations among athletic context, i.e., team-sport versus individual-sport, competitive trait anxiety, perceived ability, and self-presentation confidence for 62 men and 34 women athletes. The analyses showed that the athletic
context is associated with variations in competitive trait anxiety and self-presentation confidence; however, no main effect or interaction was noted for perceived ability. Results support the notion that aspects of the sports context are significantly related to various precompetitive cognitions.

Turner (1994) conducted a study about the efficiency of the inverted –U- theory and Hanin’s one of optimal function (ZOF) theory were contrasted in the present study. Twenty seven female and 40 male members of the Indiana University track and field team were evaluated for trait, baseline state, and recalled best state anxiety using the State Trait Anxiety Inventory (STAI) ANOVA revealed that subject possessing U classification (16 of 16 tests) did not perform better than their counterparts outside of optimal, subjects with pre-competition anxiety value within their individual ZOF performed significantly better than those with anxiety outside of ZOF in all tests, except for comparison based on coaching classification. In accordance with ZOF theory, the players were found to accurately predict pre-competition anxiety. These results indicate that ZOF theory was superior to the inverted U hypothesis in explaining the anxiety/sport performance relationship.

Tjeerdsma (1994) studied about the ability of a model based on achievement motivation theory to explain the motivation/performance process in a natural physical education setting. The subjects were 49 sixth grade children participating in a 14 lesson volleyball unit in an actual middle school. Subjects completed four questionnaires which assessed their goal orientation and intrinsic motivation in physical education as well as their motor skill and volleyball perceived competence. Results showed that the proposed model did not do an acceptable job of describing the motivation/performance process in this physical education setting. However, several significant relationships among the variables in the model were identified. Volleyball performance was positively related to consistent engagement rate and motor skill perceived competence. Motor skill perceived competence was positively related to volleyball perceived competence, while perceived
competence over all was positively related to intrinsic motivation. The only significant relationship found between the goal orientation and the remaining variables was the positive association between task orientation and the challenge dimension of intrinsic motivation.

**Ping (1993)** examined motivational predictors of cognitive competitive trait anxiety (CCTA) in a sample of 406 subjects involved in 30 events. Factor analysis of CCATI items revealed six factors: game preparation, failure, opponent’s ability, social evaluation, injury and external condition. Factor analysis of the items or competitive motives (CM) revealed five factors: desire for victory, high ability demonstration, social approval, enjoyment, and self challenge. Self wise multiple regression analyses demonstrated that all the CCTAI factors were predicted by common unique predictors of the five CM factors. Positive and negative relationships between CCTAI and CM factors did not clarify conclusiveness of whether intrinsic or extrinsic motivation differently mediated CCTA. These findings indicate that the motive is a predictor of CCTA.

**Jones, G. Swain, A. & Hardy, L. (1993)** conducted a study on the topic “Intensity and direction dimensions of competitive state anxiety and relationships with performance”. This study examined relationships between intensity and direction dimensions of competitive state anxiety, and also relationships with beam performance in a sample of female gymnasts. The 48 gymnasts, whose ages ranged from 14 to 16 years, competed in a beam competition and were divided, via the median split technique, into poor performance and good performance groups. All the subjects completed a modified version of the Competitive State Anxiety Inventory-2 (CSAI-2) 10 min prior to performance. This inventory included the original intensity scale plus a direction scale in which subjects rated the degree to which the experienced intensity of each symptom was either facilitative of debilitating to subsequent beam performance. Analyses of variance showed no significant group differences on any of the CSAI-2 sub-component intensity scores, or on somatic anxiety and self-confidence direction scores. However, the good performance group reported their cognitive anxiety intensity as
being more facilitating and less debilitating to performance than the poor performance group. Stepwise multiple-regression analyses showed that the only significant predictor of beam performance was self-confidence intensity. These findings support the proposal that sports performers' directional perceptions of their anxiety symptoms may provide further understanding of the competitive state anxiety response, and also emphasize the importance of self-confidence in predicting performance.

Jones, G. & Swain, A. (1992) conducted a study on the topic "Intensity and direction as dimensions of competitive state anxiety and relationships with competitiveness". This study examined differences in intensity and direction of symptoms of competitive state anxiety in high and low competitive subjects from the sports of rugby union, basketball, soccer, and field hockey. The 69 men were dichotomized via a median-split into high and low competitive groups based on their scores on the Sport Orientation Questionnaire. All subjects completed a modified version of the Competitive State Anxiety Inventory-2 30 minutes prior to competition. This inventory included the original intensity scale plus a direction scale on which subjects rated the extent the experienced intensity of each symptom was either facilitative or debilitative to subsequent performance. There were no significant group differences on intensity of cognitive anxiety or of somatic anxiety or on direction of somatic anxiety; however, the highly competitive group of 34 subjects reported their anxiety as more facilitative and less debilitative than the low competitive group (n = 35). This supports the proposal that sports performers' directional perceptions of their anxiety symptoms may provide further understanding of the competitive state-anxiety response.

McGuire (1992) et al. conducted a study on aggression as a potential mediator of the Home Advantage in professional Ice Hockey. Based on the subject defined delination between aggressive and non-aggressive ice hockey penalties established by Midmeyer and Brich, 13 measures were used on data collected from the official game reports and penalty records of the National Hockey League for the 1987-1988
seasons. Both macro-analysis and micro-analytic research strategies and the analysis were employed. Initial analysis revealed that home won 58.3% of the decided games. Further analysis showed a significant interaction between game location and performance. Home team incurred more aggressive penalties in games they won whereas visiting teams incurred more aggressive penalties in games they lost.

Seiler's (1992) review presents psychological performance enhancement training as practiced, taking into account the requirements and prerequisites, the target populations, the specific uses, and the generally applied training schedules. Future directions in psychological performance enhancement training are suggested respecting the need for evaluation and practice consideration.

Jones, Swain and Cale (1991) examined change in, and antecedents of cognitive anxiety, somatic anxiety, and self-confidence in a sample of male (n=28) and female (n=28) university athletes. Subjects responded to the competitive State Anxiety Inventory – 2 (Marten, Burton, Vealey, Bump & Smith 1990) and six antecedent item during the week preceding an important competition. In the case of cognitive anxiety, males showed no charge across time, females showed a progressive increase as the competition neared. Male and female showed the same pattern in somatic anxiety with increases occurring only on the competition. Self confidence scores revealed a reduction in self-confidence as the competition neared in both gender, but there was a greater decrease in females than in males. Stepwise multiple regression analyses showed that different antecedent predicted cognitive anxiety and self-confidence in males and females. Specifically, significant predictors in the females were associated with personal goals and standards; significant predictors in the males were associated with interpersonal comparison and winning.

Jones, Swain and Cole conducted study on university athletes and found that in case of cognitive anxiety males showed no changes across time through female showed a progressive increase the competition is neared.
Males and females showed the same patterning in somatic anxiety with increase occurring only the day of competition. Self-confidence scores revealed an education in self-confidence scores revealed a reduction in self – confidence neared in both gender but there was greater decrease in female then males.

As there was limited study done in the area of sprints regarding the effect of anxiety hence researcher has chosen this study.

**Razeena (1991)** conducted a study on 110 university level female Hockey players. The purpose of the study was to investigate the comparative relationship of state anxiety and aggression of defensive and offensive women Hockey players. State anxiety questionnaire was administered to all subjects after the competition. On the basis of key given by Rainer and Martin for state anxiety and A. Kumar and P.S. Shukla for aggression to correlate and compare the anxiety and aggression in defensive and attacking players separately. A standard error of a co-efficient and correlation was computed and a ‘t’ ratio was obtained. It also shows that there is no significant different between these two groups.

**Allen (1991)** has also done a study entitled “Stress and coping in adolescents” in which he has concluded that females tend to report having been affected by negative events more often and more markedly than males. Higher scores on stress among females than males indicated that females liked to compete, be noticed, loved and worry for others, sometimes seeking perfect solutions that lead to higher anxiety and stress. Possibly, females attempt to do several activities such as achieve academic excellence, take care of families, and work at one time.

**Patial (1991)** studied the selected psychological variables of female hockey players of India with the purpose to sketch a profile if national hockey players, to compare the status of national and international and finally to form the individual profiles for international players who have represented the country in the recent most international tournaments. The variables selected for the study were incentive
motivation, state and trait anxiety, sport competition anxiety and extraversion-introversion and neurotism. For the collection of data, Alberta Incentive Motivation Inventory, the Sports Achievement Motivation Test, State and Trait Anxiety Inventory, Sport Competition Anxiety Test and Eysenck Personality Inventory were administered during 23rd Senior National Hockey Championship. Mean and SD on all the variable for both the groups were calculated and ‘t’ test was used to find the significant difference in the mean scores. The group and individual profiles were sketched on the model developed by Watson et al. on the basis of results, following conclusion were drawn:

1. National and international female hockey players of India had a moderate motivation profile.
2. The level of achievement motivation was just moderate.
3. Both were beset with high trait and state anxiety.
4. Low competition anxiety was perhaps a great asset with both of them.

International players were found to be stable, introverts whereas national players had leaning towards ambiversion and neurotism.

Mincho (1991) studied the attitude of Korean national athletes and coaches towards athletic participation. The purpose of the study was to investigate the attitude of Korean national athlete and coaches towards athletic participation and to compare the attitude of the subjects classified into various sub-group according to the biographical data.

The stubbs attitudinal Inventory was followed three hundred and thirteen national athletes and thirty five coaches of nineteen different athletic teams who were preparing for the 1990 Peking Asian games were chosen as subjects.

The .05 level of significance was selected for testing the null hypothesis. A one-way analysis of variance and follow up Turkey/Kramer test were used to test the hypothesis instigated in their study.
**Weaver (1990)** studied the relationship of college student’s achievement motivation to family cohesion and aspiration: An analysis by race and gender. A disproportionate sample of 611 white’s black and Hispanic under-graduates of the Maryland Collage Park responded to a mailed questionnaire. Achievement motivation included orientation towards work, intellectual mastery, competitiveness and fear of success. Aspiration assessed the amount of educational desire, the ideal number of children and the importance of marriage. Family cohesion was measured by a sub-scale from the family environment scale. Descriptive Statistics, Chi-square Test, Person Correlation, Analysis of Covariance and Multiple Regression techniques were employed in the treatment of data. The major findings included: most black students lived on the campus, Asian and Hispanic students lived with their family, no consistent living arrangements emerge for the whites. Nearly all the students were attending the college for a degree. The majority of students had a strong desire to work hard, a moderate desire for intellectual challenge, and was moderately or highly fearful of success male tended to be more competitive than females. More black males and Asian females were competitive. The desire to work hard was an important predictor of Achievement Motivation. Most students perceived their families as moderately cohesive which indicated a healthy relationship most students wanted to marry and to have two or three children. Marriage was relatively more important than a job. The analysis by race or gender revealed few significant differences.

**Shah, Singh and Pathak (1990)** administered personality questionnaire and competitive state inventory-2 on twenty one international marathon runners to investigate extraversion, neuroticism, psychotism and state anxiety, cognitive anxiety, self-confidence. The result obtained indicated that successful marathon runners found to have high mean value in age (chronological) extraversion, neuroticism and self-confidence scale, whereas low mean value in psychotism, cognitive anxiety, somatic anxiety and total competitive state anxiety.
Bowger (1989) conducted a study to compare the state anxiety levels among ages, genders and skill levels at practice and pre-competition. The study included 137 players. Each subject completed the Spiel Berger State Anxiety Inventory. A state twice once just prior to a practice session and gain just prior to the State Age Group Swimming Championship. Test which indicated that the 15-18 age groups had significantly higher state anxiety than 19-21 and 12-14 age groups. Female had significantly higher state anxiety than male, significantly higher state anxiety was found at the pre-competition situation than at practice situation.

Jones et. al. (1989) examined changes in cognitive anxiety, somatic anxiety and self-confidence in a sample of 40 male and female university players during the period leading up to the quarter-final stage of the English and Welsh University Athletic Union Championship. Subject responded to the Competitive State Anxiety Inventory -2 (CSAI-2) on six occasions during the pre-competition period.2 week, 2 days, 1 days, 2 hour and within 30 minutes. The results demonstrated different patterns of change for the females on all three CSAI-2 sub scales. In the case of cognitive anxiety, there was no change across time in the male but females showed a progressive increase as the competition neared. Females also showed an earlier increase in somatic anxiety than males. Self-confidence remained stable in males but decreased in females on the day of the competition.

Hayajenh (1989) dwelt on the achievement motives for participating in and dropping of youth sports programmer in the United States and Jordan. The sample consisted of two groups. Sixty-five Americans and sixty-seven Jordanians both samples consisted of male and female sport participants and sports dropouts between the ages of 11 and 17 years. The most important reasons of the Americans had for sports participation was living to have fun, liking to improve skills and liking to learn more skills, for Jordanians liking to travel were the most important reasons for participation. Both Americans and Jordanians
dropouts listed emphasis a winning and losing and the lack of fun as the most important reasons for dropping out of sport programs. There were no significant differences found between American and Jordanians in their factors of achievement motivation for sport participation. However, one factor emerged with regard to Mache’s and Nicholls (1980) model in that Americans were found to be more task and independence oriented while Jordanians were found to be more ability and social approval oriented. It was concluded that Americans and Jordanians have different reasons for participation and similar reason for dropping out of sport programs.

Jones, J. G. & Cale, A. (1989) conducted a study on the topic “Relationships between multidimensional competitive state anxiety and cognitive and motor subcomponents of performance”. This study examined the relationship between multidimensional competitive state anxiety and cognitive (i.e. digit span) and motor (i.e. perceptuo-motor speed) subcomponents of performance in an experimental group of hockey players during the period leading up to an important hockey match, and also in a control group of hockey players before a routine training session. Using a ‘time-to-event’ experimental paradigm, an increase in somatic anxiety 20 min before the hockey match was accompanied by improved perceptuo-motor speed performance. Stepwise multiple regression analyses showed that somatic anxiety was negatively related to digit span performance, whilst somatic anxiety and self-confidence were positively related to perceptuo-motor speed performance. These findings suggest that somatic anxiety may be an important source of performance variance.

Lewthwaite, R. & Scanlan, T. K. (1989) conducted a study on the topic “Predictors of competitive trait anxiety in male youth sport participants”. This field study examined intrapersonal and significant adult factors related to the levels of dispositional or competitive trait anxiety experienced by 9- to 14-yr-old male participants of a competitive wrestling program. Competitive trait anxiety (CTA) is a personality disposition which reflects the tendency to experience stress in situations involving competitive
Multiple regression analyses of questionnaire data revealed that boys with more frequent somatic competitive trait anxiety symptoms 1) had lower self-esteem, 2) reported greater upset if they performed poorly, and 3) expressed a greater preference for avoiding a tournament match. Investigated cognitive anxiety symptoms involved characteristic precompetitive worries about failure and worries about adult expectations and evaluation. Youngsters with more frequent worries about failure placed greater importance on wrestling well and felt greater upset when they performed poorly, in comparison with boys who worried less frequently about failure. More frequent adult-related worries were predicted by greater personal upset for poor performance and perceptions of 1) greater parental and coach shame and upset, 2) more negative adult evaluations, and 3) greater parental pressure to wrestle.

Nandi (1989) conducted a study on anxiety and its effect upon the performance soccer skill test requiring gross motor skills and concluded that low anxiety subjects performs significantly better than that of high anxiety subjects in dribbling the ball for time and kicking the ball for distance with left foot and performed will in gross motor soccer skills, who were having low anxiety state.

Bowger (1989) conducted a study compare the state anxiety levels, ages, gender and skill at practice and pre-competition. The study included 137 athletes. Each subject completed the Spielberger state Anxiety Inventory a – State twice, once just prior to practice session and gain just prior to the state Age Group Swimming Championships. The statistical procedures used were a 3 x 2 x 2. Repeated Measures Analysis of variance. Mean comparisons were made using the Newman Keuls Multiple Range Test which indicated that the 15-18 age groups. Females had significantly higher state anxiety than males and significantly higher state anxiety was found at the pre competition situation than at the practice situation.

Teiple, et. al. (1988) suggests that interpretation of an action as an aggression will depend on the rules and perspective of the observer.
Extending this assumption to the sport situations, these researchers hypothesised that coaches, athletes and referees, due to their contrasting notes, would judge aggressive sport actions differently. To test this hypothesis, the investigators asked 20 highly skilled male soccer players, 20 male coaches and a control group of 10 rule experts to observe a series of 40 foul scenes selected from championship soccer matches and presented on a colour video monitor. Immediately after viewing each soccer scene, the observer was asked to evaluate the soccer action according to type of foul exhibited. Personal sanction to be imposed and resulting game condition chi-square analysis indicated distinct difference between the groups in their evaluation of these sport actions.

Thomas (1988) assessed the attitudes of undergraduate students majoring in physical education towards women competing in varsity sports. The Thomas, Solomon, Ellis Opinionnaire (TESO), consisting of physical, emotional, social and personal domains, was developed to be administered to under-graduate students majoring in physical education at five traditionally black institutions in the South-East. The t-test and analysis of variance statistics were used for the collection and analysis of data. Conclusions made from the opinion expressed by physical education majors towards females competing a varsity sports revealed statistical significance in (1) female physical education majors had more favourable attitudes that male physical education majors (2) male athletes had fewer favourable attitudes than female athletes (3) female non-athletes had more favourable attitudes than female athletes, (4) male non-athletes had more favourable attitudes than male athletes, (5) black and white students showed no differences, (6) age groups showed no differences and (7) in the physical domain, freshman and seniors had more favourable attitude than sophomores, while the emotional domain seniors had more favourable attitudes than sophomores and juniors.

Maynard (1988) conducted a study to assess the relationship between the martens sport competition anxiety test and the competitive state anxiety inventory as well as their effectiveness in predicting the game performance
in Rugby, 22 male university rugby players were acted as subjects for the study. A multiple regression analysis between the SCAT and the three scales of the CSAI showed a significant relationship between the SCAT and the sub-scale of somatic anxiety. A significant correlation was also noted between somatic anxiety and the performance of players who performed below their normal ability. The author suggested that the increase in self-confidence between games may have been detrimental to the performance of the team.

Reusser (1987) worked on the aggressive and non-aggressive behavior of a college basketball coach. An inter-collegiate female basketball coach selected by the investigator was videotaped six times during the 1985-1986 basketball season. The data were systematically analyzed by Cheffer’s adaptation of Flanders interaction analysis system and the emotional dimension of Cheffer’s system CAFIAS. She found out that the subject did not become more aggressive while losing as opposed to winning. More aggressive behavior was exhibited during home games when compared with away games. The subject became more aggressive when first and second halves were compared and became less aggressive as the season progressed. The subject was silent for more extended period of time and emitted more directive behavior as the season progressed.

Harvatials (1987) conducted a study to find out the effects of A-trait and A-state anxiety upon athletic performance. A total of 90 "Effect size" (ES) were conducted from the initial investigations and utilized as dependent variables which included anxiety type level, performance outcome sex of the subject and grade level. The average study ES, was 656 (SD=.842) suggesting that anxiety influences performance somewhat more than with no anxiety present. Specific suggestions were presented direct attention towards the relationship between anxiety and performance or changes in anxiety level.
Krane and William (1987) compared changes in cognitive anxiety, somatic anxiety and self confidence prior to competition by high school gymnasts and collegiate golfers.

The participants in this study were 36 girls on three high schools gymnastic team competing in conference meets and 44 female collegiate athletic association teams competing in the university of Arizona invitational golf tournament. The CEAT-2 questionnaire was used to measure pre-competitive cognitive anxiety, somatic anxiety and self confidence. The questionnaire consists of 27 items.

There was no significant difference in cognitive anxiety prior to the practice round (M=16.2), and second tournament round (M=16.7), F (2.41) = .82, P.10 there were also no significant difference in self confidence in prior to the practice (M=27.3), first (M=27.0) and second (M=27.2) tournament rounds F(2,41)=.07; P.10. A significant main effect was found on the somatic anxiety sub-scale, F (2.41) = 6.64, P.10 follow up Duncun Multiple Range Test Revealed that somatic anxiety prior to the first tournament round (M=13.5) but there was no difference between the second tournament round (M 14.4) and the practice round.

Rainey, Conklin and Rainey (1987) used the sport Competitive Anxiety Test (SCATO was used to identity athletes with high and low upper and lower 25 percent) competitive trait anxiety (CTA) from among 60 male 60 female junior high scholars. High CTA athletes reported more frequent evaluation and performance worries and more anticipated negative feeling when playing poorly than low-CTAs. These groups did not differ on perceived importance of their success/failure in sport. Male and females differed significantly on only tarn performance expectancies. Results support for the hypothesized relationship of fear and fear of evaluation to CTA.

Horvastich (1987) a study to find out the effects of A-trait and A-state anxiety upon 'athletic performance. A meta-analytic approach, A total of 90 "effect size" (ES) were calculated from the initial investigations, and
utilized as dependent variables to assess of 41 independent moderator variables, which included anxiety type, anxiety level, performance outcome, sex of the subject, and grade level, the average study ES was 0.656 (SD=0.842) suggesting that anxiety influences performance somewhat more than with no anxiety present. Specific suggestions were presented to direct attention towards the relationship between anxiety and performance or changes in anxiety level.

Brustad et. al. (1987) examined the relationship between cognitive appraisal processes and the effective characteristics of youth sport involvement using Herter's competence motivation theory as a frame work. Specifically, the presents study extended poser’s (1983) research on patterns of competitive trait anxiety (CTA) in young male score players by including female players involves in different sports. Boys baseball players (N=55) and girls softball (N=55) completed self-report measures of (CTA), self-esteem, perceived physical competence and frequency of evaluative and performance related worries about athletic competition. Multivariable analysis revealed that high CTA boys reported lower levels of self-extreme and more frequent worries about their performance they did their less anxious counter parts. For the girls, no significance relationship was found between levels of competitive trait anxiety and the cognitive variables. To enhance the experience of youth sport and the participants, it is essential that the contribution to consequences of competitive trait anxiety be more closely examined.

Zwart (1987) studied attention and anxiety responses of athletes to mental tainting technique. This study explores the change in competition anxiety, attention direction and focus, and performance in 13-15 year old swimmer (n=30) after exposure to the super learning mental training program. The experimental treatment consisted of engaging the subjects in a six weak (two hour session per week) program of (i) relaxation training, (ii) positive affirmation statements synchronized to breathing exercises and music, and (iii) visualization for mental rehearsal.
Singh (1987) administered SCAT (Marten`s) to Indian athletes and hockey players and found significant differences between the two samples on sport competition anxiety. Hockey players, both male and female, were found to have less competition anxiety as compared with the players of individual events. Male exhibited less anxiety in competitive situations as compared with the female.

Singh et. al. (1986) studied the anxiety difference between male and female Handball players of intervarsity level. 73 (male 36, female 37) subjects comprising 6 teams were investigated. The subjects were members of 1st, 2nd and 3rd position holders respectively. Marten’s sports competitive anxiety test (SCAT) for adults was administered to the subjects selected or the study. T test was applied to find out intra group differences. ANOVA was worked out to find out the difference among the different position holder of male and female teams. The difference of competitive anxiety between male and female came out to be statistically significant at .05 level though over all level is moderate in both cases.

Purpose of the study conducted by Sandhu et al. (1986) was to adapt the competitive anxiety level scale for female basketball players. 32 female basketball players were taken as subjects from the basketball teams of colleges officiated to Punjab University. The data were statistically analysed by using the statistical operation including coefficient or correlation to determine the validity. Factor analysis was also used for the adaptation of test. The result of the study revealed that the test is valid and can be used on female basketball players at college level in Indian conditions.

Holden(1986) has conducted a study on attitudes of high school students toward women’s participation in sports. The students were divided into ethnic, sex and age groups. In general, whites were the most accepting of women in sports, blacks were in the middle, and Hispanics were the least accepting. The biggest difference occurred in white males between the ages of 15 and 18 while females started at the highest level
and had only slight differences. Hispanics were reflective of the male dominated culture and supported a strong sex-role stereotype. Black males have viewed sports as an escape from the ghetto and were hesitant about allowing females the same access to sport.

**Spence & Spence (1986)** which states that difference between high and low anxiety subjects would occurs only when a stressor was present 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 ($r=.13$) (Martens and Simon, 1976).

**Debnath and Bawa (1986)** found that sports competitive anxiety between junior and senior cyclist and gymnast. But a non significant difference has been found in sports competitive anxiety between female cyclist and gymnast of national coaching camp.

**Wilfley et. al. (1986)** found that stress can be reduced with regular exercise. In the study 83 adults (37 women and 46 men) were enrolled in an individualized exercise program at a Midestern university. The POMS was administered to the subjects who completed the course. Those who were in the low fitness/high stress subgroup had positive changes in Stress, Vigor, Fatigue and Confusion. Completing the program showed no significant psychological changes. This study supports related studies that find exercise benefits those that are not physically fit and higher levels of stress.

**Bredemeier et. al. (1986)** conducted a study on the relationship at sport involvement with children’s moral reasoning and aggression tendencies. The relationship between sports involvement variables (participation and interest) and fact of children’s morality (reasoning
maturity and aggression tendencies) were investigated for 106 girls and boys in grades 4th through 7th children responded to a Sport Involvement Questionnaire, participated in a moral interview, and completed two self-report instruments designed to assess aggression tendencies in sports – specific and daily life contexts. Analysis revealed that boy’s participation in medium contact sport (the highest level of contact sport experiences they reported) was positively correlated with less mature moral reasoning and greater tendencies to aggress. Regression analysis demonstrated that sport interest predicted reasoning maturity and aggression tendencies better than sport participation. Results and implications are discussed from a structural development perspective.

Holden Laura Lee (1986) conducted a study in early spring, 1984, approximately 900 Los Angeles high school students were surveyed regarding their attitude towards women’s participation in sports. In contradiction to previous studies, this group agreed that sports were an acceptable human activity and could not be labeled as masculine or feminine.

Calderaro (1985) conducted a study on stress anxiety in sport, he concluded that sport seems to be source of acute and chronic stress with possible effects in physical and psychic health of a person. A simple test like the one used by Holmes in psycho – somatic, has allowed the Author to discover the presence of "stress anxiety" in the world of sport besides the better known pre-against anxiety" felt by the athlete. In fact, "stress anxiety" can also attract official’s trainees and other sports engaged persons with possible interpersonal side effects (family, school, work). The author also emphasis efficient interventions in order to prevent behavioural and psychomatic negative consequences. Furthermore, in order to increase individual resistance to physic, consequence certain techniques are emphasized.

Kenneth (1985) conducted a study on prediction of performance from selected personality traits, and State Anxiety Levels of competitive male and
female gymnasts. Subjects for the study were 21 male and 35 female gymnasts, aged 9 to 23 who compared in either sectional or national qualifying meets in the United States and Canada. Path analysis, a multiple regression technique was used in the treatment of the data. Based upon the findings and within the limitation of this study, the following conclusions can be drawn: (1) the personality – anxiety. Model was supported by explaining over 51 percent of the variability in the criterion, (2) pre-competitive anxiety was not a statistically significant prediction of gymnastics performance, (3) the hypothesis related to the personality performance relationship were not supported since the model explained only 38.1 percent of the total variability in gymnastics performance.

The Wear Attitude Inventory was administered by Organ (1985) to 206 students to determine students’ attitudes toward required physical education in the liberal arts programme at Howard University. The Wear questionnaire had a possible maximum score of 200, which would indicate a strongly favourable attitude toward physical education.

He found the following: (1) there was no significant difference between the students attitudes and their classifications. (2) There were no significant differences between the students and the activity area in which they were currently enrolled. (3) There were no significant differences between the students’ age and their attitudes toward required physical education. (4) There were no significant differences between the male and female attitudes toward required physical education.

He concluded that (1) the students at Howard University who participated in this study had favourable attitudes toward physical education. (2) No significant differences in attitudes concerning physical education can be predicted by the classification, sex, age or course enrolment. (3) The majority of the students (58 percent) had favourable attitudes toward physical education.

Onifade (1985) has conducted a study to investigate the relationship among selected demographic factors, physical activity belief
and meaning of physical activity (attitude). Kenyan Attitude Inventory was used to assess students’ attitude toward physical activity and the physical activity behaviour scale which was adopted from Zaichkowsky’s (1979) study was used to measure physical activity behaviour. The result revealed that Nigerian male students could be expected to seek physical activity that would be of a social experience while the female students would be probably seek experiences related to health and fitness. The Nigerian student attending universities in the Metropolitan Washington, D.C. area has valuable attitudes that seem to be expressed through different behaviors for different beliefs.

Kenneth (1985) conducted a study on prediction of performance from selected personality traits, state anxiety levels of competitive male and female gymnasts. Subjects for the study were 21 male and 35 female gymnasts, aged 9 to 23 who competed in either sectional or national qualifying meets in the United State and Canada. Path analysis, a multiple regression technique was used in the treatment of data. Based upon the findings and within the limitations of this study, the following conclusions can be drawn. (1) The personality anxiety model was supported by explaining over 51 percent of the variability in the criterion, (2) per-competitive anxiety was not a statistically significant prediction of gymnastics performance, (3) the hypotheses related to the personality performance relationship were not supported since the model explained only 38.1 per cent of the total variability in gymnastics performance.

The students were divided into ethnic, sex, and age groups and comparisons were made between the groups. In general, white were the most accepting of women in sports, black were in the in the middle and Hispanics were the least accepting. The biggest differences occur in white males between the age of 15 and 18. White females started at the highest level and had only slight differences. Hispanics were reflective of the male dominated culture and supported a strong sex role stereo type. Black males have viewed
sports as an escape from the ghetto and were hesitant about allowing females the same access to sports.

In an archival study, Widmeyer et al. (1984) examined the relationship between aggression and performance of 320 professional ice hockey teams of various times during 1176 games over a period four seasons. Aggressive penalties were operationally defined as non-sanctioned aggressive acts in which a player will make the intent to do harm (i.e. slashing, spearing, high stitching, cross checking etc.) and were separated out from accidental penalties such as tripping or interference which are usually committed in order to prevent from scoring. The average number of points a team accumulated per game was correlated with a number of dependent measures, average penalty minutes per game in the first segment of the season. Results indicated no significant relationship between aggression and team performance. For all games, combined, however, a significant positive relationship was obtained for aggression exhibited by team in the first period of games and the average number of points they accumulated per game. The author concluded that aggression is an effective strategy to achieve success in an ice hockey game, provided it takes place early in the contest.

According to Husman (1984) aggression behaviour is an overt verbal or physical act that can psychologically or physically injure another person or oneself. Aggression behaviour against another person is called extra punitive behaviour. Whereas aggression against the self is often labelled intropunitive behaviour. Aggressive behaviour is non-accidental, the aggressor intends an injury, and the behaviour selected for this is under his or her control. The aggression has selected the behaviour from various alternatives available in the situation including non-aggressive responses.

Dowthwaity (1984) administered Spielberger’s State and Trait Anxiety Inventory and SCAT to 22 women hockey players. Forwards reported consistently higher A-State than defenders. Consistent
differences in A-State Score were found in the 1st Sixth for the extreme group of high and low score on SCAT and the high SCAT group showed the greater increase from the coaching to the competitive condition. Over both teams A-State correlated significantly with SCAT.

A study conducted by Goods (1984) investigated the effects of comprehensive self-regulation training including relaxation, mental imagery, self-confidence, concentration and cognitive restructuring on anxiety and performance of female gymnasts.

Soltani (1984) has conducted a study to determine the attitudes of college and university students toward required physical education activity class programmes. Wear (1955) Inventory was administered. The results showed as significant, favourable attitude to exist among students toward physical education activity classes. Moreover, senior student attitudes were significantly more favourable (P < .02) than freshman attitudes and social science student attitudes were significantly more favourable (P < .01) than science student attitudes.

Graening (1984), concluded from his study by attitudinal data, revealed the following results – (1) Principals were more favourable toward physical education than superintendents. (2) Principals of large school districts were more favourable toward physical education than principals of small districts. (3) Principals of Northwest Region were more favourable toward athletics than principals of the Delta region, but less favourable toward physical education than principals of both Delta and Central/South West Regions. (4) Principals having physical education degree were more favourable toward both athletics and physical education than principals without these degree. (5) Superintendents having physical education degree were more favourable toward physical education than superintendents without these degrees. (6) Both principals and superintendents with prior athletic coaching and/or athletic directing experience were more favourable toward both physical education and athletics than those without this experience.
Barros (1983) has conducted a study on principal’s attitude towards physical education. Wear Inventory (1951) was administered on 352 elementary school principals to assess their attitude toward physical education. The results showed that participation in physical education classes is a matter that has significant influence in attitude toward physical education. The results showed also, that participation in physical education classes and school enrolment had a positive relationship with attitude of elementary school principals toward physical education and length of experience as a school principal had a negative one. The analysis showed that there were a positive significant relationship of the principals’ attitude toward physical education with his/her opinion of the importance of physical education and sports in the elementary school curriculum, agreement with the scholastic sports games, and physical education teacher performance.

Bhullar (1982) in the year 1982 under took a study entitled “A Comparative study of attitude towards physical activity of university male and female students”. The purpose of this evaluation was to discover the structure of attitude towards physical activity of male and female students living in the same environment. Subjects for this study included both male and female students. The 200 (100 male & 100 female) subjects who participate were drawn randomly from various teaching departments of the Punjab University campus, Chandigarh. Their age ranged from 16 to 23 years. To measure attitudes, physical activity attitude scale constructed and standardized by the author was used which consisted of 70 items. Scoring was done on the basis of ‘Scale Product Technique by giving weight for each response category in the Likert fashion and then multiplying the same with scale value of the statement

Nelson and Langer (1982) examined some of the psychological variables present among athletes in competitive situations. They assessed anxiety levels of the team member by using Taylor’s Manifest Anxiety scale. The result showed that performance of athlete with extremely high
levels of anxiety was poor. It was also found that athletes who scored extremely low level of anxiety did not perform well.

**Brown (1982)** found that both males and females who participated frequently in contact sports were more willing to use aggression than were those who reported that they rarely participated in such sports. It is difficult to determine whether the folk love and sanctions surrounding the sport produced aggressive acting people, or whether aggressive people choose to participate in such sports. There are some individuals that certain sports do encourage aggression, as stated by **Brederbeir (1985)** in her study. She analysed interviews of forty females and male basketball players and assessed their feelings about the legitimacy of aggression behaviour along a scale of “injurious acts”.

**Brown (1982)** studied the inter-relationship of Androgyny, self-esteem and achievement motivation of female’s players. Subjects were 75 female players from varsity teams at LSU and 72 non-players selected from English classes on the basic of scores on two personality inventories, the Mehrabian test for achieving tendency for females and the short form of the PRF ANDRO scale the 101 subjects were categorized into four sex role and three achievement groups. The self-esteem scores were also recorded for each subject. Regression ANOVA and chi-square were used in the analysis of data. Female players were more and regimes than the non-athletes. The non-athletes consisted largely of feminine sex typed individuals. Subjects, scored significantly, lower on self-esteem. These were no significant correlation between self-esteem and achievement motivation.

**Marten (1982)** study conducted on four sample of Volleyball team found subjects scoring high on Achievement Motivation (Mehrabian-Scale) are low in fear of failure and high in need achievement. Same way subjects scoring low on Achievement Motivation Scale were found high in fear of failure and low in motive to success. The study further
concluded that there was no significant relationship between sports competition anxiety and achievement motivation.

Maxson (1982) conducted a study in which the Mehrabian Measures of Achieving tendency and a survey of a swimming achievements instruments designed by the investigator were give to 44 college swimmers (29 male and 15 female) from four universities. There was a significant positive ‘r’ between the scores of the achievement motivation questionnaire and the swimming success survey. In addition college swimmers achieved significant higher score on the Mehrabian Measure of achieving tendency than the norms for college students in general, and female swimmer obtained significant higher level of achieving tendency than the level of the male swimmers.

Miltons (1981) collected data from 335 collegiate female athletic directors utilizing a questionnaire designed to assess trends in selecting coaches for female athletic. These demographic result revealed (a) 37% increase in the number of coaches for female athlete, (b) a greater increase at the assistant 22% rather than head 8% coach level, (c) a substantial decrease in male coaches 124 in comparison to their female counter parts 44, (d) a significant decline (294) in female head coaches and (e) a large increase in the number of male head coaches (437). As the basis for this present investigation, current practices and affirmative action strategies were discussed i.e., gender employment trends, possible explanations of these findings were offered.

Balance (1981) has conducted a study on administrators’, teachers’, and students’ attitudes toward physical education. 25 administrators, 50 teachers, and 100 students in the Bartie County School System in NC were given the wear attitude Inventory. There was no significant difference between the attitude of administrators and teachers toward physical education. However, administrators and teachers had significance higher (P<.05) attitudes towards physical education than did the students.
Ervin (1981) has conducted a study on visually impaired adults: opinions about physical education and physical recreation. Interviews were conducted with 30 legally blind adults, ages 16 to 50, to obtain their opinions in response to 37 questions were concerning past and present experiences in physical education and recreation and factors relating to these experience. 3 judges independently rated the responses a having positive or negative affects toward physical education and recreation. 2 values (P < .05) were obtained for responses to 24 of the 37 interview questions. Of these, 14 were favourable and 10 were unfavourable. It was concluded that students had positive feelings about their remembered school based childhood and adolescent physical education and recreation experiences and negative feelings about their past and present involvement and/or inclusion in family, neighbourhood community and church physical education and recreation. ANOVA showed no significant difference in opinion as related to school placement (Public v/s residential).

Silva (1981) tried to identify variable that are related to optimal performance at elite levels of wrestling. The subjects were 86 candidates competing for 1980 US-Greco-Roman and free style Olympic wrestling teams. Psychological testing included trait testing and pre-competitive state testing. The reports showed non-qualifier scored higher than qualifiers on anxiety, depression and regression. Separate anxiety measures generated from the STAI and the IPAT anxiety trait measures indicated that the qualifiers were lower on all measures of anxiety than were the non-qualifiers.

Virgina (1980) studied the attitude of emotionally disturbed and normal children towards physical activity. Subject was 50 emotionally disturbed and 391 normal children. The findings indicated that normal children had a more favorable attitude towards physical activity then the disturbed children. In study of female sports socialization Greendorfer examined whether differences exited between these systems of socializing agent’s family peers of school during three life cycle stages. She found that
during childhood, the female participation were more likely to have been influenced by peers and family respectively, than by teachers and coaches. At the adolescent stage the influence of family was not significant, while peers and teachers and during young adulthood, the most influential agent was the peer group.

She also found out the relationship between father level of education and type of sports participation and also the socio-economic status, occupation of father and type of sports participation. Specifically, the lower the father’s educational and occupational status, the more likely the girls was a team sports participant, while the higher the education occupation level were associated with the individual and dual sport participation.

Haque (1980) conducted a study on the attitude of the heads of the Governmental and Non-governmental secondary schools of Dacca city. The purpose of the study was to assess favorable and unfavorable attitude of heads of each school towards particular aspect of physical education. The individual scores of each statement were added and compared with natural value.

The author observed that the heads of the schools of governmental schools and non-governmental schools have a positive attitude towards physical education. He further observed that the heads of the governmental schools have more sincere attitude than their non-governmental counter parts.

Mize (1980) determined the relationship between attitude towards physical activity and sex role orientation of college students. Scores on the Kenyan Attitude toward Physical Activity Inventory (ATPA) and the Bem Sex Role Orientation Inventory (BSRI) were processed by inter correlation, t-test, ANOVA, Duncan’s Multiple Range Test and Chi-square. Her subjects were 267 college age students (M=179, F=88). All variables of ATPA were inter-related except chance and athletics for the total group. Analysis of the male and female groups yielded some
different results for various factors of the ATPA. Significant difference between males and females was found.

**Basu (1980)** has conducted a study to determine the attitudes of parents toward physical education programme and to find out their opinions (negative or positive), if any. The investigator prepared a questionnaire comprising 100 statements based on a very simple pattern viz. Yes/No, which covered 10 aspects of physical education. The study revealed that a majority of the parents had a favourable attitude towards all aspects of physical education. Parents had a highly favourable attitude towards physical education because it promoted physical health and fitness, mental maturity and alertness, personality development, sociability, efficient use of leisure. Their opinion was political interference in sports was undesirable. They wanted physical education programme for all.

**Weinberg (1980)** investigated the relationship between competition trait anxiety and state anxiety and golf performance in a field setting. Test low moderate and high CTA collegiate golfer (10 per cell) performed in a practice round one day and day 2 of competitive tournament. Co-relation between SCAT and state anxiety indicated that SCAT was good predicator of pre-competitive state anxiety. The direction of state anxiety and performance CTA main effects provide support for oxedine` s (1970) contentions that requiring fine muscle coordination and precision (i.e. golf) are performed best at low level of anxiety.

**Ahmed (1980)** examined the relationship between the state anxiety of male and female scholastic athletic team members and their athletic team’s psychosocial environment. 441 male and female athletic team members were selected from Eugene Springfield, Oregon, area high schools. A packet containing directions, a personal data form requesting age, sex, and sport, the Team Atmosphere Scale and the State Anxiety
Scale were given to each subject. Males and females did not significantly differ in their mean TAS scores or state anxiety.

**Betty et. al. (1980)** studied 1977-78 South Dakota State University Women’s Basketball Team (N=12) and were measured on state anxiety inventory (SAI), sport competition anxiety tests (SCAT), pre-game HR, game field goal 1, free throw 1. Ss in groups 1 consisted of the players who attempted over 122 field goals or less. Results of ANOVA indicated significant (P/_.05) difference between groups on season field goal % and SAI subsequent data analysis throughout this study in corporate. Only the values from group – 1.A significant r was found between scores on the SAI and SCAT significant (P/_.05) multiple regression equations to estimate field goal shooting proficiency from selected measures of anxiety produced multiple R’s ranging from 47 to 66 and accounted for between 22 and 44 percent of the variance in performance. Amultiple regression equation for predicting free throw success was not significant (P.05).

**Poteet, D. & Weinberg, R. (1980)** conducted a study on the topic “Competition trait anxiety, state anxiety, and performance”. This study tested predictions about social facilitation using a competitive (evaluation) vs. non-competitive setting. In addition, subjects who exhibited low, moderate, or high anxiety concerning competition were selected to determine the relation of anxiety to social facilitation. The design was 2 (competition/no competition) X 3 (competition trait anxiety), with state anxiety and performance as the major dependent variables. In a significant main effect of anxiety about competition subjects high in competitive anxiety displayed higher levels of state anxiety than subjects moderate or low in anxiety about competition. Performance differences were non-significant although means were as predicted.

**Simon, J. A. & Martens, R. (1979)** conducted a study on the topic “Children's anxiety in sport and nonsport evaluative activities”. Comparisons of pre-event state anxiety (A-state) were made among 9–14 yr
old boys participating in required school activities (classroom tests and physical education class, 145 Ss), nonrequired nonsport activities (band solos and band group competition, 136 Ss), and nonschool sports (baseball, basketball, football, gymnastics, hockey, swimming, and wrestling, 418 Ss). Ss in all groups were significantly different from each other, with those in nonrequired nonsport activities manifesting the highest A-state levels followed by Ss in nonschool sports and then those in required school activities. Higher A-states were found among individual sport than team sport participants. A significant interaction showed that the highest A-states were reported among those in individual contact sports and the lowest in team-contact sports. Differences in A-state levels among the activities are discussed in terms of the evaluation potential existing in each activity.

**Widmeyer, W. N. & Birch, J. S. (1979)** conducted a study on the topic “The relationship between aggression and performance outcome in ice hockey”. This investigation determined if aggression is a means of obtaining success in amateur ice hockey. Two analyses were undertaken. The first examined the relationship between illegitimate tactics (as measured by penalty minutes accumulated) and team success, while the second compared the penalty minutes accumulated by successful individuals (i.e. all stars) with the penalty minutes accumulated by non-all stars. The sample was comprised of the 87 teams and their 1,667 players who participated in the Ontario University Athletic Association from 1971-72 to 1976-77. The relationship between team aggression and team success was analyzed with a Pearson Product Moment Correlation. A t test was used to compare the mean accumulated penalty minutes of all stars with those of non-all stars. The results failed to support the premise that aggression is a means to success for teams or for individuals.

**Dockstader (1979)** carried out an investigation to explore the relationship between need achievement and locus of control with regard to realistic goal setting, atypical and typical shift strategy, varying conditions of success and failure. Subjects manifesting different levels of need achievement (higher and low) and control scale (Rotter 1966) and
Mehrabian tendency to achieve scale (1967). The study involved a series of 2x2x10 factorial design defined by level of achievement and control ideology over a series of ten trials. The sample consisted of 149 male high school students between the ages of 14 to 17 years, attending a week long summer cross-country training camp. The results were mixed and support for the underlying hypothesis’s that locus of control and achievement motivation are two independent measures that interact to enhance prediction of achievement behavior could not be unequivocally maintained. The discussion of the results includes some speculation about casual relationship among the measures.

**Martin (1979)** has conducted a study to determine the attitudes of elementary school teachers and administrators toward athletics for female. Three hundred seventy three elementary school teachers and administrators were chosen. The results show that (1) Teachers and administrators disagreed with items which presented negative statements about female athletes and agreed with items presenting positive views toward female athletes. (2) Teachers and administrators agreed that a difference exists between the personality of the female athlete and non-athlete. (3) The pattern of participation revealed females participating in sports traditionally accepted for female involvement. Male teacher and administrators established a pattern of participating in sports which have traditionally been reserved for men. (4) Teachers and administrators in this study could not be characterized by a particular pattern of attitudes. (5) Sub group responses indicated that the certain subsets of teachers and administrators were either more positive or more negative than others. It was concluded that elementary school teachers and administrators are a positive group toward female participation in athletics though teachers appeared more positive than administrators.

**Walker (1979)** conducted a study on aggression in sport fouling in university basketball. The purpose of the study was to determine differences in the occurrence of aggressive actions (fouls) under several conditions evident in basketball contests. The intent was to examine the
possibility of predicting aggressive actions throughout the game. Official play-by-play score sheet and official National collegiate Athletic Association Box Score Sheets were used together the data. The findings of this investigation indicate that fouling is predictable when the range of scoring increases and during the first minutes of the second half. The implications associated with the finding are the following.

(a) The frustration of the fame situation causes aggression behavior.
(b) No cathartic effect is apparent as a result of displaying aggressive actions.
(c) Several factors contribute to the occurrence of fouling behavior in basketball games including accidents, international fouls, coach requested fouls, and over aggressiveness by players.

Ciccolella(1978) made a study to determine differences in aggression of male and female athletes. Subjects for this study included male and female under-graduate students at Alma College and Brigham young University who participated in varsity athletic in basketball, softball (baseball for men) tennis, and swimming during 1977-1978 academic years. The study employed the Minnesota Personality Inventory (MMPI) as the measuring instrument. The scales of the MMPI selected to determine aggression were 2 (depression), 3 (hysteria), 4 (psychopathic deviancy), 5 (masculinity-feminity) and 9 (hypomania). The conclusion of this study was that female varsity athletes were more aggressive than male varsity athletes.

Vogel, et. al. (1978) conducted a study on 200 male and 200 Female army personnel were tested prior to the beginning of basic training. Substantial improvement in fitness was noted in the males but not the females. After the eight-week training period was over, significant drops in Tension, Deprecation, Fatigue and confusion were noted in the males as well as a significant an increase in Vigor. There was a reduction in the scores (except Fatigue) for Females but none were statistically significant, and there was a slight increase in Vigor.
Nesvig (1978) conducted a study to determine whether a relationship existed between an athlete’s level of achievement motivation and gymnastic meet performance. A secondary purpose was to determine if the level of achievement differ between male and female gymnasts. The McClelland thematic appreciation test (MTAT) was administered to measure the level of achievement motivation among the male and female members of the SDSU inter-collegiate gymnast’s team. Subjects gymnastics meet scores were taken as the measure of proficiency in gymnastics. Using Person’s ‘r’ it was found that no significant relationship existed between achievement motivation and gymnastics meet performance among men and women (P .05.) Through the use of a t-test is was found that a significant difference existed between scores attained by men and women on the MTAT (P.05) ANOVA demonstrated significant difference in MTAT scores among the men but not among women.

McCarthy, J. F. & Kelly, B. R. (1978) conducted a study on the topic “Aggression, performance variables, and anger self-report in ice hockey players”. This study partially replicated a former one showing a relationship between aggression and performance among hockey players. With certain penalties used as a measure of aggression, two groups of male college ice hockey players were compared for differences in goals and assists. Those rated high in aggression scored significantly more goals than those low in aggression. The direction of differences in assists was the same but did not reach significance. When the same groups were compared for shots on goals, significant differences were found, favoring the high aggressive group. This findings was discussed in light of energy output and efficiency. Attempts to relate performance and personality measures were not successful when comparisons on a self-report measure of anger were analyzed.

Martens (1977) was administered on the subjects. T-test was used to analyse the data. Results of the study revealed no significant
difference between male and female national weight-lifters of Manipur with regard to sports competition anxiety.

Gordon W. Russell (1976) conducted a study on the topic “Crowd Size and Competitive Aspects of Aggression in Ice Hockey: An Archival Study”. The season's records of a Canadian ice hockey league provided the data for an investigation of aggression in relation to crowd size and competition. Crowd size was positively related to aggression in one season but not in the preceding year. Aggression increased over the three periods of game play but not across the season. League standing and the score existing during play were both significantly related to aggression. However, the aggression displayed by a team in a match was unrelated to their league standing vis-a-vis that of their opponents. The results are generally discussed within a frustration-aggression framework.

Weinber (1976) compared the resultant achievement motivation of athletes and non-athletes. The study included male athletes and non-athletes from three small colleges and two large colleges. The instrument used to assess resultant achievement motivation (N. Ach.) was the male form of Mehrabian Achievement Scale (MAS). The MAS was administered to all the subjects under relax conditions. Individuals were classified as athletes if they earned a college varsity award or as non-athletes if they had failed to earn an athletic award in high school as well as college. Based on this criteria 857 athletes and 673 non-athletes were included in the study. The athletic sample consisted of individual representing 13 different sports. The resultant Non Achievement Levels of athletes and non-athletes were analysis by a two factor fixed effect analysis of variance. The results were; (1) Athletes demonstrated a high N. Achievement level than non-athletes. (2) The individual sport athletes demonstrated a higher N. Achievement level than team sport athletes, (3) the large college athletes and small college athletes demonstrated similar resultant Non Achievement levels.
Dickinson (1976) suggests that there are cultural differences in the reinforcement provided for aggressive behaviour. This is reflected in sports in a distinct differences between the reinforcement provided for males and females in their aggression. Western society, as a whole, tends to reinforce aggression in males to a very much greater extent than in females. In parallel fashion, western society also tends to punish females for aggressive behaviour to a much greater extent. The aggression is more common in male sports because of greater reinforcements available to them.

Zoble (1976) found in her study that women have been viewed as non-aggressive, men are seen as aggressive. This difference was discussed by Zoble in review of literature on women in sports. She found that girls are more punished for aggressive behaviour in childhood than are boys.

Zaichkowskygt. et. al. mentioned in his book “The child and physical activity that early sex role training discourages aggression in girls but encourages it in boys. Tulko and Neal (1975) have revealed that women learn not to be aggressive, not to win, not to get into situations where there is a risk of pain and not to be where there is the risk of pain and not to be taught — or they will lose their feminity.

Bucher (1975) conducted a survey covering 100 teachers, parents, respective of the general superintendents, and principals of school and directors of physical education to determine what they believed should be the role of physical education in American Schools and Colleges. Overwhelming support for physical education as a part of the education programme was indicated by 89 percent of the persons surveyed; sixty one percent believed that physical education should be scheduled once a day. Only two group professions and parents indicated that they might possibly by more in favor of three times a week. Most of the persons surveyed, thought that all types of activities, including teams sports, carry over activities, individual activities and recreational activities
should be part of physical education programme. Principals and superintendent thought that physical education class should be larger than the size of classes for academic subjects. A majority of the opinion that physical education grades should be reported separately from the other educational offerings. School administrators and professors were the only group who believed that it should correspond with the marking in other subjects.

**Goodson (1975)** conducted a study to assess the attitude of adult male community college students toward physical education activity and to develop implications for community college physical education programmes from an analysis of the result. The Mcpherson-Yuhass Attitude Inventory consisting of fifty statements was administered to 106 male ranging in age from forty to sixty five. The inventory consisted of twenty six negative statements and twenty four positive statements.

The findings revealed that adult males did not show a favourable attitude toward physical activity, although the combined group mean (190.5) was much closer to the score necessary to favourable (200) than it was to the score required to be unfavourable (100). Twenty-three of the fifty inventory items received a mean score high enough for favourable agreement (4.0 or above), whole none was in the non-favourable category (2.0 or below). An analysis of variance revealed no significant difference among the three groups of adult males.

**Klavora (1975)** studied optimal pre-competitive state anxiety of football players. Oxidine's proposition regarding the optimal arousal level for the typical participant in football was examined on 4 level of football competition: Junior High School, Senior High School, Alberta Junior and University. The pre-competitive state anxiety was measured by Spielberger's STAI anxiety scale. No Significant differences in optimal pre-competitive state anxiety at the competitive levels were found.
Zillman, Johnson & Day (1974) compared aggressive behaviours of male athletes to those of non-athletes. The athletic population was divided into those contact sports (football and wrestling) and those in non-contact sports (swimming, tennis, track, and Gymnastics) when provoked, the non-athletes evidenced the highest level of retaliatory aggression as to the two athletic groups whereas the contact sports athletes proved to be more punitive in their aggression than were the non-contact sport athletes. It was concluded that the contact sport athletes were counter acted by the “strong aggressive habits” possibly needed in their sports (or because of the expectations others have regarding aggression in contact sports athlete.

Delforge (1973) conducted a study where an attitude inventory using the semantic differential technique was administered to 100 male and female graduate and under-graduate students. Subjects were selected at random from each of the following students’ populations. 1) Ambulatory physically handicapped. 2) Wheel chair physically handicapped. 3) Non-handicapped and 4) College athletes.

No significant differences in attitudes toward physical activity in general or toward each of the six dimensions of physical activity were found among the four main study groups. No significant differences were detected between male handicapped and male non-handicapped and between male handicapped and female handicapped students. Attitudes expressed by male students and by male and female handicapped students toward physical activity as an ascetic experience were significantly less positive than for all other dimensions.

Jones (1973) studied the effect of anxiety and need for achievement on the performance of high school wrestlers. Data were obtained from the Thematic Apperception Test the test anxiety questionnaire, expectancy rating by the individuals and by their coaches. Performance data were obtained from match score books and observation. It was concluded that the personality traits of anxiety and
need for achievement had a tendency to influence both the expectancy and the actual performances of these HS wrestler. Subjects who measured low anxiety level performed better than those high in anxiety. The groups scoring highest in performance was that of low anxiety and high need for achievement. The lowest level of performance was demonstrated by the group high in anxiety and low in need for achievement.

Ray (1970) conducted a study in order to find out the attitudes of high school girls and their parents towards physical education. The evidence indicated that the students who achieved high fitness scores and their parents viewed to contributions of physical education class for more favourable than did the students who were less physically fit and their parents, and the parents and students differ in their views of the mental, emotional contributions. Parents and students for both groups had similar views about the physical psychological outcomes and the social contributions, while with regard to the emphasis placed on physical education in the total school programme. The parents of the low fitness group viewed this more favourable than their daughters. It was just the opposite with the high fitness group. Attitudes toward physical education were positively related to the senior high school girl’s achieved physical fitness score. A lower score regulated in a lower attitude towards physical education.

Wright (1970) conducted a study by using Wear Attitude Inventory to the nineteen physical education teachers and 1440 tenth grade girls to determine if significant differences existed between the expressed attitudes of students and the teachers’ perception of the student’s attitudes. Differences between the expressed attitudes of the teachers and the students’ perception of the teachers were also investigated. Analysis revealed that teachers had a better attitude toward physical education than did the classes as a group. There was no significant difference in the attitudes of students and their teachers’ perception of their attitudes; however, there was a difference in the expressed attitudes of teachers and the students’ perceptions of the
teachers’ attitudes. Students perceived a less favourable attitude than the
teachers expressed.

Morgan (1970) administered three forms of IPAT 8-parallel form
anxiety test to seven varsity wrestlers at the University of Missouri. The
first test was given before the season began, a second 45-60 minutes
prior to a match judged easy by the coach. Surprisingly the pre-match
anxiety scores were lower than the preseason scores, but there was no
difference in anxiety scores between the easy and difficult matches.

Harvey (1969) found that achievement is an important component
in the psychological make-up of the group of athletes understudy. Thirty
non-athletes, thirty team sport athletes, thirty individual sport athletes
were tested to determine their need for achievement (n. achievement) as
measured by McClelland’s 4-picture test and a modified 6-picture test
which included 2 athletic team indicated no significant differences
among the n-achievement response scores of the three groups or among
the n-achievement score of the ten athletic sub-group.

Singer (1968) distinguished team sports athletes from individual
sports athletes in certain traits by using Edward Personality Preference
Scale (PPS). It was reported that tennis groups scored significantly
higher than both the basketball and the normative groups on the
achievement variable. On aggression the normative group achieved lower
score than the tennis group.

Ferris (1968) investigated the attitude of Manitoba high school
principals toward physical education. The Wear Attitude Inventory was
incorporated into a questionnaire, to which 91 of 100 principals of high
schools responded. These comparisons were made between small
enrolment (less than 300) and principals with larger enrolment;
principals with different educational preparation; principals who engaged
in personal recreational sports activities and principals who indicated
they did not participate in them, supervisors and principals of schools
with a longer class time for physical education and principals of school
with a shorter class time for physical education. As an entire group, the principals had a favourable attitude toward physical education. No statistically significant attitude differences were found between the different comparison groups.

The Wear Attitude Inventory was administered to 188 college women in a variety of physical education activities by Vincent (1967). The final grade received for the activity course was used as the success factor. Attitudes were analysed both as to values and as to activity groups and correlations were computed between attitude and success. Attitudes toward physical education were generally favourable, with the contributions of physical education to the physiological-physical values being higher than other values examined. There was a significant relationship between attitude and success at the .05 level. The higher significance accrued to those students having more favourable attitudes.

G.Devi (1967) in her study — “A study of sex difference in reaction to frustrating situations”. She found significantly different aggressive responses for males and females towards ten different situations incorporated in the test. Male subjects were found more overtly aggressive than females. As regards suppressed aggression she found no significant difference between the responses of male and female subjects.

In many cross cultural studies, play aggression ‘was found to be higher among males than among females. Taylor and Epstein (1967) found that males reached aggressively to provocation by male opponents but un-aggressively to female opponents. Females, on the other hand, were unaggressive to female opponents but reached to provocation by male opponents in a highly aggressive manner.

Carder (1966) found the relationship between manifest anxiety and performance in college football. The subjects were 40 freshman football players who were rated on 2 scales by 3 members of the coaching staff. One scale consisted of ranking on total performance
during the season and the other scale involved skill rating in blocking, tackling, movement agility, and running speed. Subjects were also tested on the M.A.S. and 3 motor ability tests to identify potential. The results indicated no significant relationships between the M.A.S. Scores and total performance, individual skill performance, or actualization of Football potential.

James (1966) comprehensively examined the effect of anxiety and need for achievement on the performance of high school wrestlers. Data was obtained from the Thematic Apperception Test, the test anxiety questionnaire expectancy rating by the individuals and by their coaches. Performance data was obtained from match score books and observations. It was concluded that the personality traits of anxiety and need for achievement both the expectancy and the actual performance of these high school wrestlers. Subjects who measured low in anxiety performed better than those high in anxiety. The groups scoring highest in performance was that of low anxiety and high need for achievement. The lowest level of performance was demonstrated by the group high in anxiety and low in need for achievement.

Chamber (1965) conducted a study on the appraisal of the attitudes of the principals, teachers and students toward physical education as a secondary school subjects. The study revealed that teachers and students, unlike the principals, held a favourable attitude toward physical education as a secondary school subject. Teachers and students were aware of the importance of physical education in developing fitness, activities which were liked by pupils and teachers were also the activities in which they desired instruction and in which they estimated their skills to be high.

Ayers (1964), from his study has concluded that parental attitude towards physical education were not related to socio-economic status. Parents considered the activities and the outcomes of physical education
programme either desirable or essential to the total educational development of the daughter.

Harris (1964) compared high and low fitness indices college women in Psychological traits and found that there is a tendency for the fit individual to appear more stable in certain Psychological traits and to appear less anxious in others.

Berkowitz (1963) concluded that more aggression was levelled against men than against women

Buss (1963) investigated the effect of three kinds of frustration on college students’ aggression, task failure interference with winning – money and interference with attaining a better course grade. The different frustration did not generally lead to different intensities of aggression, but all three lead to more aggression than a control. Although frustration did elicit aggression, the effort was slight. This was explained by the mode of aggression (physical) and the fact that it had no instrument value in overcoming frustration. It was suggested that instrumental value of aggression is a major determines of the frustration aggression relationship. Men were found to be more aggressive than women. Men aggressed more against men than against women, but the sex of the victim was unimportant for female aggressors. Thus, sex differences in aggression occur not only in the aggressor but also in the victim.

Engels, et. al. (1962) investigated the relationship among induced muscular tension, manifest anxiety levels, and motor learning.

The study was conducted on 24 male students. The subjects were randomly divided into 4 equal groups for the per suit motor learning task group – 1 learned at constant rpm’s, group – 2, learned at increasing rpm’s producing task induced muscular tension, group – 3 learned at constant rpm’s while gripping a hand dynamometer and group – 4 learned at slow, rpm’s but were tested at the same criterion rpm’s as the other three groups.
The results of this study seem to indicate that there is a differential effect of internally and externally induced muscular tension on motor learning. Group 1 had the best learning performance followed by group 2, 4, and 3. There was significant difference between group 1 and 3, 4 and between group 2 and 3.

Francis (1962) investigated 61 male students with scores more than one standard deviation above (high anxiety) and below (low anxiety) the mean on the Pittsburgh revision of the manifest anxiety scale were used as subjects and assigned randomly in each category to experimental and controlled groups. The test consisted of matching a specific foot pattern while walking at 2 mph on a treadmill for 1.5 min. with total missteps constituting the error score. The experimental groups received shock at predetermined intervals. Subjects had two trials with pulse rate recorded before and after each trial. Following each trial, the subjects rated themselves on the anxiety during the test. The finding supported the hypothesis that stress inhibited functioning of high anxiety subjects and facilitated the performance of low anxiety subjects. Absence of stress produced better performance in high anxiety subjects than stress.

Baker (1962) studied the effects of anxiety and stress on gross motor performance. Sixty one male students with scores more than 1 S.D. above (high anxiety) and below (low anxiety) the mean on the Pittsburgh revision of the Manifest Anxiety Scale were used as subjects and assigned randomly in each category to experimental and control groups. The test consisted of matching a specified foot pattern while walking at 2 mph on a treadmill for 1.5 minutes, with total missteps constituting the error score. The experimental groups received shock at predetermined intervals. Subject had two trials with pulse rate recorded before and after each trial. Following each trial, the subjects rated themselves on the anxiety during the test. The findings supported the hypothesis that the stress inhibited efficient function of high anxiety subject facilitated the performance.
The purpose of the Isenberger (1959) study was to determine the relationship between the self-attitudes of women physical education major students and those of women physical education teachers. Subjects used in the study were 277 women physical education major students from three institutions and 167 women physical education teachers. The “Who Am I?” test, a Twenty Statements Test of self-attitude (TST), was used as a measure of self-attitudes. The result of this study indicated that there was a significant difference between the self-attitudes of student groups within a school and between schools. It was also indicated the self-attitudes of teachers differed significantly from those of students enrolled in a liberal art college or a teachers college connected with a university but were similar to those of students in a teacher education institutions.

Livon and Muson (1957) made an experimental study to see the relationship between overt aggression and ego-control in both male and female subjects. They found a significant negative relationship between the amount of expressed aggression and ego-control. This study further suggested that girls developed greater ego-control and less overt aggression.

Burris (1955) studied the case of aggression in boxers and wrestlers as measured by projective technique. In this study, the Rosenzweeg P.F. study, TAT pictures, and a sentence completion test were administered at intervals throughout the season to the following collage, groups. Nine boxers, eight wrestlers, nice cross country and seventeen control subjects. The tests were analysis for number, severity and direction of aggressive responses significant differences indicated than the boxers were least aggressive of the groups and that they tended to direct aggressive feeling inwardly (intropunitive) rather than outwardly upon persons or thighs in their environment (extra punitive) indications were that the intensity and direction of aggression of these various athlete and no athlete groups were quite different. The Thematic Apperception Test was judged the best instrument for assessing aggression.