CHAPTER – II
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Review of the related studies implies locating, reporting and evaluating reports of research as well as reports of casual observation and opinions that are related to the individual’s planned research project. It gives the scholar an understanding of the previous work that has been done. It enables him to know the means of getting to the frontier in the field of a problem. Until we have learnt what others have done and what still remains to be done in an area, we cannot move forward. The review provides us with an opportunity of gaining insight into the methods, measures, subjects and approaches employed by other research workers. The review of related studies, in any field form the foundation upon which all future work will be built. Therefore, Clarke and Clarke (1970) had advised that a survey of the existing literature must be accomplished before data are collected.

Though the investigator aimed at a comprehensive and thorough survey of the related literature, yet it is quite possible that some studies may have escaped his attention. The present review is based upon the available literature in respect of variables under investigation and is, therefore, confined to the studies to which the investigator could lay his hand upon.
MOTIVATION

Shephard (1985) examined whether personal factors influence participants decisions to begin and continue exercise programmes. He summarized three surveys – the Canada Fitness Survey, Toronto Life Assurance Study and General Food Study. Results from the Canada Fitness Survey indicated that the 13,500 individuals preferred individual sports such as walking and cycling over other activities, especially structured exercise classes. Forty percent of the individuals indicated they would participate in physical activity if they had more time, because it makes them feel better and is fun and exciting. Females also valued the benefit of weight control and improved flexibility. Workers in Toronto (N = 1800) completed Kenyan's Scale. Five groups of individuals high and low adherents, dropouts, non-participants and controls all reported the same four values for physical activity: Catharsis, Aesthetics, health and social contacts. Workers in General Food Study reported similar values for physical activity. They noted that exercise was valued for health, fun, socializing, enhanced physical appearance and the development of self-discipline. Shephard states, “It may be premature to draw conclusions about factors that would encourage recruitment to and persistence in an exercise program”. However, the author suggests that all participants will be more likely to join an exercise programme if a wide range of activities are offered and incentives are provided to join. Participants may be higher in an exercise programme if external incentives (e.g. money, T-shirts) are given until the exerciser
reaches a fitness level at which intrinsic rewards of exercise are possible.

Vallerand, Gauvin and Halliwell (1986), offering a Best Performance Award on a stabilometer task of fifth and sixth grade French-Canadian boys in a tournament, investigated the effects of competition on perceived competence following performance on a 4-point scale. Intrinsic motivation was operationalized as initial task choice and time spent on the stabilometer during a post-experiment free-choice period. Results indicated that losers were less intrinsically motivated and perceived themselves to be less capable than winners. The authors concluded that the findings support the cognitive evaluation theory of Deci and Ryan (1980, 1985). Vallerand and his colleagues further suggested that competition can affect intrinsic motivation by reducing an individual's sense of self determination as well as "by leading individuals to perceive themselves as being in-competent through their in ability to obtain performance contingent rewards".

Singh and Sharma (1987) conducted a study to find out the motives for participating in sports wing and competitive sports activity of 100 male sports wing players representing five colleges and Panjab University Campus. The players belonged to handball, Table-tennis, badminton, Lawn-tennis, athletic, basketball, cricket and wrestling. On the basis of importance rating they found that most of the players wanted to be physically fit, team work, improve their skills, learn new skills, their last preference being to get out the house.
Duda (1988) examined the relationship between goal perspectives and selected motivation behaviours (i.e., persistence and intensity) among intramural league participants. Persistence was defined as the number of years of participating in the sport and intensity was operationalized as the hours/week spent practicing the recreational sport in the student's free time. Results indicated that greater persistence and intensity corresponded to the student's emphasis on task involvement in sport.

Bar-eli (1989) believed that the ability to cope with psychological stress, and competitive motivation, were two variables which were considered to affect motor performance. So he applied the Bayesian approach in order to estimate the diagnostic relevance of these two constructs on pre-start Vulnerability to psychological crisis before competition. 28 West German basketball experts and 45 Israeli team handball experts responded to a psychological crisis questionnaire (competition) in which they were asked to assess the components of the Bayesian likelihood ratio for each level of the two psychological constructs. ANOVA and paired t-test procedures were applied to the data. The results revealed that under a non-crisis condition, very high coping ability and balance motivation were mostly probable, while the reverse was true under a crisis condition. The results were similar for both samples.

Deater (1989) conducted a study regarding development of a model of achievement behaviour for physical activity. The purpose of the study was to evaluate the relationships among
various individual difference variables and their roles in predicting achievement behaviours in a physical activity setting. Two samples of male and female university students consisting of 315 and 146 subjects, enrolled in required physical education skills programmes were drawn. The results showed that a model including the behavioural commitment indices produce an arch and determination but with substantial degree of parsimony. Also this model accounted for a large percentage of variances of the performance indices.

Duda (1989) examined the relationship between goal perspective and participation and persistence in sport among 871 high school students. In accord with recent cognitive motivation theories, two major goal perspectives were assessed i.e., a task involved or mastery goal orientation and an ego-involved or social comparative perspective. The subjects were divided in five groups based on their involvement in sport: (1) those involved in organized and recreational sport, (2) those involved in organized sport only, (3) those involved in recreational sport only, (4) those dropped out of sport and (5) those never involved in sport. Each subject indicated his/her preference for sport success and failure which was mastery/social comparison-based and oriented to the individual/group. MANOVAS and discriminant analysis revealed significant participation group differences with the organized sport only and organized/recreational sport participants indicating greater preference for each goal perspective than dropouts and non-participants. Further, results indicated that dropouts, non-participants and those subjects presently involved in organized sport only placed less emphasis on mastery-based success than
social comparison-based success. Dropouts and organized sport only participants had the least preference for social comparison failure. These findings reveal how an emphasis on social comparison goals (and de-emphasis on mastery goals) might lead to a lack of persistence in athletic contexts.

Hayajneh and Ahmed Ali (1989) determined the differences between American and Jordanians in their reasons for participating in and dropping out of youth sports programme and examined factors in achievement motives that might discriminate between American and Jordanians in terms of perceived competence, perceived control, extrinsic/ intrinsic motivation and achievement goals. The sample consisted of two groups: sixty five American and sixty seven Jordanians. Both samples consisted of male and female sport participants and sports dropouts between the ages of 11 and 17 years. Questionnaires were administered to the American sample, while data for the Jordanian sample was utilized through systematic stratified selection process from an earlier study in 1986. The most important reasons that Americans had for sport participation were liking to have fun, liking to improve skills and liking to learn new skills. For Jordanians, liking the team spirit, liking to be popular and liking to travel, were the most important reasons for participation in sports. Both American and Jordanian dropouts listed emphasis on winning and losing and the lack of fun as the most important reasons for dropping out of sport programmes. There were no significant differences found between Americans and Jordanians in the factors of Achievement Motivation for sports participation. However, one factor which emerged with
regard to Maehr and Nicholls (1980) model is that the Americans were found to be more task and independence oriented while the Jordanians were found to be more ability and social approval oriented.

Little and McCullagh (1989) examined 45 girls in the age group 12 to 15 years to find the potential interaction effects of using different instructional strategies with intrinsically and extrinsically motivated youths. Subjects whose motivation to participate in sports was either one on intrinsic mastery or extrinsic mastery were randomly placed in one of two instructional groups: Knowledge of results (KR) or knowledge of performance (KP). All four groups received a videotaped modeled demonstration of the skill to be learned, the tennis forehand. Subjects participated in a 3 day acquisition period and a one day testing phase during which both form and outcome scores were recorded. Analysis of acquisition outcome scores yielded no significant differences between motivational orientation and instructional groups. Multivariate analysis of the test phase outcome and form scores revealed significant group differences, as well as significant group-by-motivation and group-by-blocks interactions. Subsequent discriminate analysis indicated that form scores were more affected than outcome scores by the instructional and motivational group manipulations. The interaction results of the test phase supported the prediction of different performance effects as a function of motivational orientation and instructional strategy.
McAuley and Terry Duncan and Vance V. Tammen (1989) designed to assess selected psychometric properties of the Intrinsic Motivation Inventory (IMI) (Ryan, 1982) a multidimensional measure of subjects experience with regard to experimental tasks. Subjects (N = 116) competed in a basketball free throw shooting game, following which they completed the IMI. The LISREL VI computer program was employed to conduct a confirmatory factor analysis to assess the tenability of a five factor hierarchical model representing four first-order factors or dimensions and a second-order general factor representing intrinsic motivation. Indices of model acceptability tentatively suggest that the sport data adequately fit the hypothesized five factor hierarchical model. Alternative models were tested but did not result in significant improvements in the goodness-of-fit indices, suggesting the proposed model to be the most accurate of the models tested. Coefficient alphas for the four dimensions and the overall scale indicated adequate reliability.

Rosenbery and Jeffrey (1989) investigated coaching leadership styles on team climate, achievement motivation, and performance in women’s gymnastics. They also developed an instrument to identify the gymnastics coaching leadership styles. The class (1) advanced female gymnasts were between 14 to 17 years of age. The gymnasts had a minimum of 2 years training with the coach participating in the study. Two teams were combined into each leadership style, 16 gymnasts in the authoritative group that completed the Team Climate Questionnaire (TCQ) and the Berlin Sport Motivation Q sort, while 12 were included in the democratic group which completed the
TCQ and the Q sort, and 11 participated in the performance measure. Seventeen gymnasts in the situation specific group completed the TCQ and the Q sort, and 11 were included in the performance measure. After the data were compiled, a one way analysis of variance (ANOVA) was utilized to identify any statistically significant differences between the coaching leadership styles groups with regard to team climate, achievement motivation, and performance. Within the limitations and delimitations of this investigation, the following conclusions may be drawn: (1) Leadership style does influence differences in team climate between situational and authoritative groups. (2) Leadership style does influence differences in achievement motivation between democratic and authoritative groups, and between democratic and situation specific groups. (3) Leadership style does not influence differences in performance and authoritative and democratic groups, between the authoritative and situation specific group or between the democratic and situation specific groups.

In Weber and Wertheim's (1989) study at a community gymnasium, 55 women community gymnasts were randomly assigned to one of three groups - control, self-monitoring of gymnasium attendance, or self monitoring of attendance plus extra staff attention. The effects of these interventions on gymnasium attendance over 3 months were examined. A 3 x 4 (Group X time Phase, first 3 weeks to last three weeks) ANOVA indicated that the main effects for group and time predicted attendance at the gymnasium attendance during the first 3 weeks was significantly greater than attendance thereafter. The control
subjects attended significantly less than the self-monitoring subjects at all phases. Further research is suggested toward using self-monitoring staff support and periodic progress feedback for increasing program adherence.

Whitehead and James Robert (1989) investigated motivational outcomes consequent to participation in physical fitness testing procedures. Seventh and eighth grade school children (N = 165) were administered the intrinsic motivation inventory before and after participating in a fitness test where they received bogus positive, negative or no verbal feedback (control). MANOVA and casual modeling procedures revealed that positive feedback increased intrinsic motivation while negative feedback decreased it. Analysis showed that changes in intrinsic motivation were mediated by changes in perceived competence. In a second experiment seventh and eighth graders (N = 370) participated in either the president's challenge or the FITNESS GRAM fitness tests. Because of their different evaluative procedures and incentive schemes, it was hypothesized that these tests would have different effects on intrinsic motivation, MANOVA and ANOVA revealed no significant differences between fitness test groups on intrinsic motivation or physical self worth. However, there was a clear gender effect on the perceived competence aspect of intrinsic motivation and self worth. These results partially support the case for applying the tenets of cognitive evaluation theory and effectance motivation theory of fitness testing situations in order to avoid threats to intrinsic motivation.
Gold, Ginger Lee (1990) investigated the achievement orientation, self-confidence, and attribution of five female collegiate varsity tennis players ages 18-22. Changes in these constructs were described and their interrelationships were explored over a single competitive tennis season. Quantitative and qualitative measures, including questionnaires, interviews and journals were used to assess achievement orientation, self-confidence, and attributions. The results were integrated to develop player motivation profiles. Results indicated that: (a) the players were stable in their level of achievement orientation to a match, irrespective of confidence level, (b) each player's achievement orientation had different characteristics, (c) athlete's pre-match expectations were higher for events they won, (d) following matches which they won, athletes tended to have lower expectations for winning the next match, and (e) substantial increases and decreases in expectancy to win and play well were observed between matches. Finally, the advantages of using an idiographic design to study fluctuations in athlete’s motivation were underscored.

McAuley Edward and Terry E. Duncan (1990) investigated the roles of intuitive (subjective performance perceptions) and reflective (causal attributions) appraisals in the generation of affective reactions to gymnastics performance of college students 32 males, 49 females in age group from 18 to 31 years. They were asked to complete a short background questionnaire documenting age, sex, and year in school prior to performing their floor exercise routine. Both intuitive and cognitive appraisal were significant predictors of general effect, whereas self-related
effects were predominantly influenced by intuitive appraisal and other related effect by causal dimensions. The stability dimension evidenced the strongest relationship with both general and other related affective reactions. Commonality analysis determined both types of appraisal to account for up to 14.7% of the co-joint variance in emotional reactions, suggesting that intuitive appraisal may well be perceived as causal attributions under certain circumstances.

Peter Brodkin and Maureen R. Weiss (1990) studied the developmental differences in motives for participating in competitive swimming across the lifespan. Six age groupings were chosen based on underlying cognitive criteria identified in the literature – Younger and older children, high school/college age, and young, middle, and older adults. Swimmers from YMCAS (N = 100) completed the participation motivation questionnaire modified by Gould, Feltz, and Weiss (1985). An exploratory factor analysis identified seven factors: characteristics of competitive swimming, health/fitness, social status, affiliation, energy release, significant others, and fun. A MANOVA on the factor scores revealed a significant age group main effect. Follow-up analysis indicated that characteristic of competitive swimming was rated significantly lower by the older adults while social status was rated significantly higher by older children and high school/college age swimmers. Significant others were rated significantly higher by children and fun was rated most important by younger children and older adults. Finally, health/fitness motives were rated highest by young and middle adults and lowest by older children and older adults.
Weiss’s (1990) study about children (N = 133) 8 to 13 years of age, who were attending a summer sport program, completed a series of questionnaires designed to assess perceptions of competence and control, motivational orientation, and competitive trait anxiety. Measures of physical competence were obtained by teachers’ ratings that paralleled the children’s measure of perceived competence. Perceived competence and teacher’s ratings were standardized by grade level, and an accuracy score was computed from difference between these scores. Children were then categorized as under estimators, accurate raters, or over-estimators according to upper and lower quartiles of this distribution. A 2 x 2 x 3 (age level by gender by accuracy) MANOVA revealed a significant interaction of gender by underestimating. Girls were lower in challenge motivation, high in trait anxiety and more external in their control of perceptions than accurate or over-estimators. Underestimating boys were higher in perceived unknown control than accurate and overestimating subjects. Their perceived competence may be a likely factor for discontinuation of sports activities or low levels of physical achievement.

Whitehead and Corbin (1991) took seventh and eighth grade school children as subjects (N = 105) who volunteered for an experiment that was ostensibly to collect data on a new youth fitness test (The Illinois Agility Run). After two un-timed practice runs, a specially adapted version of the Intrinsic Motivation Inventory (IMI) was administered as a pretest of intrinsic Motivation. Two weeks later when subjects ran again, they were
apparently electronically timed. In reality, the subjects were given bogus feedback. Subjects in a positive feedback condition were told their scores were above the 80th percentile, while those in a negative feedback condition were told their scores were below the 20th percentile. Those in a control condition received no feedback. The IMI was again administered to the subjects after their runs. Multivariate and subsequent univariate tests were significant for all four sub-scale dependent variables (perceived interest-enjoyment, competence, effort, and pressure-tension). Positive feedback enhanced all aspects of intrinsic motivation, whereas negative feedback decreased them.

Butt and David (1992) found the motivational differences among tennis players who were compared on variables from Butt’s (1987) sport protocol. The 46 participants represented: (1) an elite group of players of Davis Cup Caliber (current or ex-Davis Cup players); (2) a university competitive tennis team; and (3) a group of recreational players. The psychometric properties of scales and their inter-correlations were reported. Multiple-range tests yielded significantly different levels of ambition, aggression, competence, competition and control between the groups with the elite group scoring most highly on all variables.

Ryckman Richard M. and Jane Hamel (1992) examined 72 ninth grade female adolescent’s involvement in organized team sports. Answering several questions about the degree of their involvement in organized team sports, and responding to three personality inventories designed to assess the intra-personal motivational variables, including affiliation, competition, and
achievement were investigated as predictors of degree of sport involvement. Involvement was operationalized as the number of different sports played by these adolescents. Stepwise multiple regression analysis indicated that girls who had greater involvement in sports had stronger needs for positive simulation through friendship and weaker needs for emotional support and attention than girls with lower levels of involvement. Girls with higher involvement also had stronger competitive attitudes based on personal development goals. There was, however, no relation between hyper-competitiveness (competitive attitudes aimed at self-aggrandizement and opponent denigration) and sport involvement for these adolescents.

An assessment of motivation for sports participation and performance of Punjabi athletes were done by Jagdish Kaur (1994). The sample consisted of 700 (with the age group of 14 to 22 years) drawn from colleges affiliated to the universities of Punjab i.e. Guru Nanak Dev University, Amritsar; Punjabi University, Patiala and Panjab University, Chandigarh. Two samples were taken in two different phases. The subjects taken in the first phase were 100 and for second phase were 600. The first phase data was used to construct the two motivation scale for Sports Participation Motivation scale and motivation scale for sports performance which the second phase of the study was aimed to construct the norms of the two motivation tests. Factor analysis (Factorial design) was used to construct the participation motivation and sports performance motivation scales. Pearson's Product Moment correlations were worked out to established validity, reliability and objectivity of the scales. Hull scale was
used to develop the norms of the two scales. The conclusions of the study was (i) 11 (eleven) factors with the rotated loading in the range of .36 and upto .87 for measuring of motivation for sports participation. (ii) 10 (ten) major factors with rotated loading in the range of .44 to .84 for measuring sports performance motivation. (iii) Batteries on both the scales on motivation developed test inventories of motivation meet the criterion of scientific authenticity, i.e. the test are reliable, objective and valid.

Gill, J. K. (1998) investigated self-concept, motivation and extraversion-neuroticism in relation to performance and age of female athletes. The sample consisted of 200 subjects (females) performing at inter-college and inter-university levels in cricket, athletics, softball and kho-kho. The self-concept questionnaire (Raj Kumar Saraswat, 1984), motivation scale for sports performance (Dr. Jagdish Kaur, 1994), Eysenck Personality questionnaire of Eysenck (1978) standardized by Mohan and Virdi (1985) were used to collect the data. Analysis of variance 2x2 ANOVA was applied to analyze the data. (i) The results indicated that university female athletes were found significantly better on physical, social, temperamental, educational, intellectual and total self-concept as compared to college level female athletes. No significant difference was found on moral self-concept. Female athletes of second age group (19-21 years) were found significantly better on physical and intellectual aspects of self-concept as compared to first age group (16-18 years). No significant difference was found between these groups on other variables of self-concept. (ii) University female athletes were found significantly better on ability and effort, media and
public aspect, skill, knowledge of results as sources of sports performance motivation compared to college athletes. College athletes were significantly better on the remaining sub-constructs of sports performance motivation i.e. social support, expectation of others and material awards than university female athletes. No significant difference was found between both the groups on total motivation female athletes of second age group (19 to 21 years) were found significantly better on ability and effort and skill as sources of sports performance motivation than the first age group (16 to 18 years). However, first age group (16 to 18 years) was found significantly better on social age group (19-21 years), (iii) University female athletes scored significantly higher on extraversion than college female athletes. However, college female athletes scored significantly higher on neuroticism and psychoticism. First age group (16 to 18 years) scored significantly higher on neuroticism and psychoticism as compared to second age group (19 to 21 years). However, no significant difference was found on extraversion between these two groups.

Ferrer-Caja, E. Weiss, M.R. (2000) conducted a study to examine the relationships among social factors, individual differences, intrinsic motivation, and effort and persistence in the physical education context using cognitive evaluation theory as a framework. Female (n = 201) and male (n = 206) high school students completed measures of motivational climate, teaching style, perceived competence, self-determination, goal orientations, and intrinsic motivation. Teachers rated the students on effort and persistence in the class activities. Hypothesized relationships among the variables were tested using structural
equation modeling. Results revealed that perceived competence and goal orientations directly predicted intrinsic motivation and mediated the effects of motivational climate and teaching style on intrinsic motivation. Intrinsic motivation directly predicted effort and persistence. Task goal orientation mediated the effects of learning climate on perceived competence and self-determination. The strongest predictors of intrinsic motivation and effort and persistence were task goal orientation, perceived competence, and learning climate.

Weinberg, R. Tenenbaum, G. McKenzie, A. Jackson, S. Anshel, M. Grove, (2000). The purpose to investigation was to compare participation motives of youth in competitive sport versus physical activity using culture, self-reported physical activity levels, and gender as independent variables. Participants were 1,472 boys (n = 822) and girls (n = 650) from the United States, Australia, and New Zealand. Three self report inventories were administered to all participants to determine the amount and frequency of participation as well as participation motives for competitive sport and physical activity. Results from principal component factor analyses revealed stability across cultures in the four factors describing competitive motives (i.e., competition, social/energy, fitness/fun, teamwork) as well as from the four factors describing physical activity motives (i.e., intrinsic, extrinsic, fitness, energy release) accounting for 44% and 51% of the variance respectively. Results from the 3 x 2 x 3 (Physical Activity Frequency x Gender x Culture) MANOVA's on the competitive sport and physical activity questionnaires revealed significant multivariate main effects for all three independent
variables for both questionnaires. Post hoc tests indicated that all four factors were related to these main effects across competitive and physical activity motives. Results are discussed in terms of the differing motives for sport and physical activity and the importance of understanding the particular social milieu in which these activities occur.

**ANXIETY**

Bahrke, Michael Steveen (1977), compared the influence of acute physical activity and “non-cultic” mediation versus a control treatment on state anxiety. Seventy-five adult male volunteers served as subjects with 25 Ss randomly assigned to each group. Physical activity was performed at 70 percent of \( \text{Vo}_2 \text{ Max} \) for 20 minutes by Ss in the exercise group. Ss assigned to mediation group practiced Benson’s Relaxation Response for 20 minutes and the Ss in the control group simply rested quietly in a reclining chair for 20 minutes. State anxiety was measured by means of the Spielberger STAI, and it was assessed – (1) Prior to, (2) immediately following, (3) ten minutes following each treatment. Oxygen consumption, heart rate, skin temperature and blood pressure were also measured as confirmatory variables under selected conditions. The data were analyzed by means of two-ways repeated measures ANOVA, and this analysis revealed that a significant reduction in anxiety occurred for each treatment. This held for both those Ss falling within the (1970) developed their own measures of anxiety. The State-Trait Anxiety Inventory (STAI). The STAI items are bring statements such as “I feel upset” (State), or “I worry too much over something that doesn’t
Martens (1977) construction of the Sport Competitive Anxiety Test (SCAT) has represented a notable standard of this principle by its measurement of Competitive Trait Anxiety (CTA). This construct assesses individual differences in perceiving competitive situations as threatening and leads to corresponding differences in A - State responses. The SCAT Manual (Martens 1977) presents impressive data and information documenting theory, development, reliability, and validity of this inventory. Essential validity was best demonstrated in that SCAT. Predicted program A - State Scores (r=.64) as compared to the STAI A - Trait (r=.30) and coaches' ratings (r = .12) (Martens and Simon, 1976).

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

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

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

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

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

Two studies have been reported in which the relationship between pre-competitive state anxiety and athletic performance were studied in a field setting. A study by Klavora (1977) utilized boys’ high school basketball teams and designed this investigation as a test of the inverted – U hypothesis. State anxiety was measured prior to each game and performance as ascertained by coaches’ ratings, for each athlete across 8 to 14 games. State anxiety scores ranged from 10 to 40, while performance was categorized by coaches as outstanding, average or poor. Tabulation procedures resulted in average anxiety scores for five points along the horizontal (anxiety) axis. A configuration of means strongly supportive of a bell shaped curve was displayed.

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

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

Recently a 12-month follow-up and pre-post analyses done by Doyne et al., (1987) individuated development of feelings of accomplishment and enhanced self-efficacy in subjects. Fremont and Craig Lead (1987) found aerobic exercise helping in alleviating depressed mood. Suban et al., (1987) found reduction in trait anxiety of their subjects following physical conditioning exercises. Balogun (1987) observed that more physically fit individuals, especially females, demonstrate better body image, enhanced self-concept and self-esteem when compared to the less physically fit females. Raglin and Morgan (1987) reported that anxiety reduction through physical exercises. Positive effects of exercises on mood (Dyer and Grouch, 1987) and enhancement in self-concept (Plummer and Koh, 1987) have also been reported. In fact, the exercises have been seen to become so much part of one's life that if it is missed even for a day the individuals report feeling of guilt irritability, depression and sluggishness (Crossman et al., 1987).
Burton (1988) examined relationships among components of the Competitive State Anxiety Inventory-2 (cognitive worry, somatic anxiety, and self-confidence) to each other, to physiological measures and to performance prior to, during, and after bicycle competition. Undergraduate male students (n = 24) participated in three counterbalanced conditions – (a) non-competition, (b) success, and (c) failure – participants completed the CSAI-2 at pre-mid, and post competition in each condition and frontalis muscle activity was recorded at those times. Results revealed that the cognitive and somatic components of state anxiety are moderately related to one another and change differently over-time. Intra-individual regression analysis conducted to test relationships between anxiety and performance revealed no linear or curvilinear relationships between any of the CSAI-2 components and performance. The frontal is IEMG / performance relationship was best explained by a linear trend. The findings support the prediction that competitive state anxiety is a multidimensional construct with related components that are influenced differently by competitive conditions and task demands.

Although sports psychologists have devoted considerable attention to anxiety responses in reaction to threatening situations, such as sport competition, numerous questions remain concerning the dynamics of competitive anxiety and its relationship to performance. This lack of understanding may be due in part to the failure to employ multidimensional and sport specific measures of anxiety.
Crocker, Peter-Ronald Earl (1988): Investigate SMT in a quasi-experimental controlled study with high performance youth athlete. The study sample consisted of the 1987, Alberta Canada games men and women's (under 19) volleyball teams separated into control and treatment groups, within each team, on the basis of geographical location. The treatment group was administered on eight week. Package was consisting of one hour modules. All subjects were evaluated on affective, cognitive and performance measures at pre-treatment and post-treatment, while the treatment players were also evaluated at six months post-treatment. Further data was collected three weeks post-treatment at the National Challenge Cup.

Bowen Hancy Helon (1989): conducted a study to examine the effects of levels of training for counsellors – in – training and levels of education for supervisors for those counsellors – in – training, state and trait anxiety and self-rating of counselling skills of trainees. Trainee participants completed a pre-test and post-test instrument package which included an experimental made questionnaire, the state trait anxiety inventory, the counsellor rating form, and the supervisor rating form (post-test only). Twenty-eight sets of trainees and their supervisors completed the instruments. Results of the multivariate analysis of covariance (MANCOVA) of the data indicated no trainee supervisor interaction effects for the set of anxiety and self rating dependent variables. Multivariate analysis of covariance indicated no significant main effect for either training level or supervisor education level on the set of dependent variables.
Kumari and Kamlesh (1990) investigated the level of state and trait anxiety of track and field male athletes (N = 21) and boxers (N=21) by administering to them the State and Trait Anxiety Inventory (Self Evaluation Questionnaire) by Spielberger et al. Both the track and field athletes and boxers exhibited a higher level of state as well as trait anxiety. Boxers were found to be significantly higher in state anxiety and track and field athletes were higher in trait anxiety.

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

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

Ferraro, T. (1999) reports in their valuable study "A psychoanalytic perspective on anxiety in athletes". A great deal of the literature on the relationship between anxiety and performance has come from a cognitive-behavioural perspective. This paper examines the relationship between the two constructs from a psychodynamic perspective. Included is a discussion of winning and the anxiety of separation from an object relations perspective, the dread of success, self psychology, Freudian instinct theory, and the secondary gain that is found in defeat. Suggestions for future directions in treatment of anxiety within the athletic context are offered as well as a postscript.

Baker, J. Cote, J. Hawes, R. (2000) in his study relationship between coaching behaviours and sport anxiety in athletes. Previous research has identified the relationship between athlete sport anxiety and various sport outcomes (e.g. performance and dropout). For the majority of athletes involved in sport, the coach is an influential element of the competitive experience. Two hundred and twenty-eight athletes from 15 sports, completed the sport Anxiety Scale (SAS) and the Coaching Behaviour Scale for Sport (CBS-S). 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. Results
indicate that negative personal rapport was a significant predictor of all measured forms of sport anxiety while competition strategies were a significant predictor for total anxiety, concentration disruption, and worry. Other behaviours were not significant. The findings suggest that negative rapport between coach and athlete is an important contributor to athlete anxiety. In addition, behaviours that the coach demonstrates relative to competition can be influential in reducing athlete anxiety.

Wiggins, M.S. (2000) conducted a study to determine if separate groups of athletes, based on educational years of experience, have different intensity and directional perceptions of trait anxiety. A total of 136 female athletes (65 high school, 71 college) in several sports were given the Competitive Trait Anxiety Inventory – 2D (CTAI-2D). Athletes were divided into facilitative, unimportant; and debilitative groups based on overall directional anxiety scores. A significant interaction effect was found for cognitive anxiety intensity, as well as a main effect for somatic anxiety intensity. Results partially supported the notion that athletes separated into high school and college groupings will report differing levels of pre-competitive anxiety. Subject Headings were anxiety, self-esteem, competition, personality inventory, athlete, adolescent, girl, young adult, and woman.

The purpose of Campen and Roberts (2001) study was to describe coping strategies and to investigate the correspondence, or “match”, between these strategies and dimensions of anxiety. A sample of 52 recreational runners who participated in a road race completed a survey of their use of coping strategies and how
effective they perceived these strategies to be, as well as measure of anxiety. Study findings revealed that all participants used at least one strategy within each of the four coping subtypes (somatic, behavioural, cognitive, and social), with social and cognitive strategies being the most frequently used. Social strategies also were perceived to be the most effective in reducing pre-competitive anxiety. Female runners, in particular, showed a preference for social strategies such as affiliating with other runners or coaches, to reduce anxiety. Trait anxiety, age, perceived effectiveness of cognitive strategies, and number of coping strategies predicted overall levels of pre-competitive anxiety. Further, there appeared to be support for a matching of coping strategy and dimension of anxiety, with use of cognitive strategies predicting cognitive components of anxiety, and use of social and somatic strategies predicting somatic components of anxiety.

Diehl, N.S. Brewer, B.W. Van Raalte, J.L. Shaw, D. Fiero, P.L. (2001) examined the relationships between two social psychological factors and exercise partner preferences, 97 women (mean age 32.42; SD = 9.85 years) provided demographic information, indicated their exercise partner preference, and completed measures of social physique anxiety (SPA) and perceived social discomfort (PSD in exercise settings. Chi-square analyzed on PSD and exercise partner preferences revealed significant effects, X2 (4) = 34.53, p<.001. Logistic revealed an effect for the SPA X PSD interaction, LR = 0.97, p < .01. When PSD was low, SPA had little impact on the odds of selecting a partner. When PSD and SPA were high, there were
far lower odds of selecting an exercise partner. Overall, based upon the results, the number of exercise partners may be an important issue for women and women with high SPA may use an exercise partner to help moderate their anxiety, thereby increasing the palatability of the exercise setting. Subject Headings were woman, exercise, non-competitor, partner, preference, body composition.

Jones, G. Hanton, S. (2001) made an attempt to assess the differences in feeling states indicated by performers who reported being facilitated or debilitated by symptoms associated with competitive anxiety before competition. A sample of high-standard swimmers (n = 190) completed a modified version of the Competitive State Anxiety Inventory-2, including both intensity and direction subscales, and an exploratory checklist of feeling state labels, which comprised positive and negative feeling state labels. Our findings supported the general hypothesis that ‘facilitators’ report significantly more positive feelings than ‘debilitators’, who report significantly more negative feelings. Descriptive frequency counts of the largest percentage differences between ‘facilitators’ and ‘debilitators’ resulted in the selection of the ‘confident’ feeling state label on the positive subscales, with it being identified most frequently by the ‘facilitators’. Furthermore, of the negative feelings, the groups indicated the label ‘anxious’ most frequently. This study has extended previous research into the notion of positive and negative anxiety and has revealed individual differences in the combination of feeling states experienced by performers during competition.
AGGRESSION

The purpose of John (1978) study was to investigate the relationship between aggression and athletic performance. Using an archival approach on the records of a college hockey team over an eight year period, a high aggressive and low aggressive group was defined. Aggression was defined on the basis of certain type of norm violations which distinguished aggressive acts more clearly then former research studies by separating instrumental aggression from hostile aggression. The results showed a significant relationship between aggression and successful performance, as measured by goals and assists. It was speculated that the present study could become the basis for systematic and programmatic research on aggression and other variables.

In one study McCarthy, J.F. and Kelly, B.R. (1978), investigated the relationship between aggression and athletic performance. Using an archival approach on the records of a college hockey team over an eight year period, a high aggressive and low aggressive group was defined. Aggression was defined on the basis of certain types of norm violations which distinguished aggressive acts more clearly than former research studies by separating instrumental aggression from hostile aggression.

Larry (1982) conducted a study to examine the effects of vicarious participation in Physical activity on subject
aggressiveness. The independent variable were task strategy viewed (co-operative, competitive, and competitive – aggressive), and subject arousal (angered or non-angered).

The various combinations of the two preceding variables produced six treatment conditions. Ten high school boys were randomly assigned to each of the six treatment conditions and exposed to their respective experimental manipulations. Subjects' aggression scores in both the pretest and post test conditions were obtained by use of the Buss Aggression Machine. Difference score from the pre-test to the post test conditions were subjected to analyses on variance, and orthogonal contrasts (when applicable) to determine which treatment sums were significantly different. The data obtained from the present study indicate that the strategy of physical activity viewed yielded significant differences.

Applications of orthogonal contracts indicate that it is the actual viewing of an aggressive model that results in increased aggressiveness. No difference was found between angered and non-angered arousal conditions.

Mugno and Feltz (1985) examined a) if there was a relationship between youth football players' observations of illegal aggressive acts and the transmission of those acts to players' own games; and b) if there were differences between high school players’ and youth league players’ awareness of illegal aggressive acts and the use of those acts. The volunteer subjects were 347 high school football players and 122 high school non-
players between the ages of 15 and 18 years, and 125 youth league football players and 133 junior high or middle school non-players between the ages of 12 and 14 years. Players learned, through observation, only one more illegal aggressive act on the average than non-players. High school players learned an average of only 1.4 more aggressive acts than youth league players. Results also revealed significant correlations between the number of illegal aggressive acts that players observed and the number of those acts used in their own games for both high school and youth league players.

Wall and Gruber (1985) The purpose of this study was to measure levels of aggression and state anxiety in competitive situations, and to determine whether significant differences exist between these two variables in relation to the difficulty and outcome of certain games. Using a recently developed short form of the Bredemeier Athletic Aggression Inventory (BAAGI-S) and the competitive state anxiety inventory (CSAI). The authors studied two components of these variables: reactive aggression (RA) and instrumental aggression (IA) among 21 female intercollegiate basketball players 17 to 22 years of age. While the CSAI results were able to identify relationships between aggression levels due to game importance or outcome, the BAAGI-S failed to distinguish these differences.

An investigation was carried out concerning the relevancy of a short form of the Bredemeier Athletic Aggression Inventory (BAAGI-s) was investigated. Previous research yielded a relationship between anxiety and aggression. Hence, it was
hypothesized that scores on the BAAGI-S would co-vary with changes in state anxiety scores as a function to basketball game outcome and importance of the contest. Twenty-one women intercollegiate basketball players responded to both questionnaires before and after two baseline practice sessions and what they perceived to be easy or crucial games. The Competitive State Anxiety Inventory scores were reliable. Reliability of the BAAGI-S data was questionable since internal consistency coefficients for instrumental aggression were low to moderate but quite adequate for reactive aggression. Athletes' Anxiety scores were significantly higher for the crucial than the easy games. Anxiety remained high after a loss and dropped significantly after a win. Reactive aggression scores were not influenced by the importance or outcome of the contest. The few significant changes in instrumental aggression were not consistent with changes in anxiety. Thus, measures of athletic aggression have not been established as psychometrically sound.

(Wall, B.R. Gruber, J.J. (1986)

Klodecka – Rozalska, J. (1990) reported during three years, the psycho-social development was observed in a group of 218 school pupils, aged 10-15 years, attending sports or ordinary classes (the latter served as the control groups). After use of the aggression scale of the A.H. Buss and A. Durkee “Hostility-Guilt Inventory”, the questionnaire on neuroticism “Jaki jestes?” (What are you Like?) by E. Skrzypek and M. Choynowski and the interview method, it was found out that general aggressiveness had been increasing with age, and was strongly correlated with neuroticism in both groups of boys. However, increase of
aggressive behaviours was greater and statistically significant in the non-sporting group. In sport-active boys significant decrease of neuroticism level and less intense aggressiveness was observed. These correlations did not appear in the examined girls. Solely, the girls from the control group showed significant drop in the index of guilt-feeling. It might be postulated that the more intensive physical activity took part in the regulation of aggressive behaviours connected with neuroticism in the group of boys from sports classes, producing a favorable effect in the process of their social development.

Ryan, M.K., Williams, J.M. and Wimer, B. (1990) conducted a study on Athletic Aggression to examine the stability of athletes Legitimacy judgments and behavioural intentions over the course of a basketball season and the relationship between these factors to actual behaviour. The 49 female basketball players responded to a questionnaire that was derived from Bredomeier's (1985) Continuum of Injurious Acts. The preseason Legitimacy rating of aggressive actions made by first year basketball players were significantly higher than those made by more experienced players, but by the end of the season the first year participants' ratings had dropped to a level comparable to their more experienced teammates. Preseason legitimacy judgments were found to predict player aggression during the season. A univariate analysis of variance (Experience x LTA) with repeated measures on the LTA score was used to determine if the amount of LTA scores change was dependent upon the subjects' previous basketball experience (First year s. 2 or more years). The preseason to end-of-season main effect was significant, F (1,45)
= 7.94, p<.01. The experience main effect was not significant but the hypothesized interaction between subjects’ previous experience and LTA score was supported, F (1,45) = 5.76, p<.05. The first year players exhibited much higher acceptance of aggressive acts, but preseason legitimacy judgments decline over the course of season to the level of the experienced players’ legitimacy judgments, which remained constant from preseason to end season. By Bredemeier, B.J., Weiss, M.R., Shields, D.L. and Cooper, B.A.B. (1986)

Scholtz and Willemse (1991) describe the frequency of aggression in South African sport since 1938 was studied. The primary sources of ex post facto information were newspaper reports, supplemented by open and structured interviews with witnesses of sport aggression. Three hundred episodes of sport aggression were reconstructed and subjected to a content analysis. Four types of aggression were analyzed: aggression among participants themselves, aggression among participants and referees, other kinds of aggression and aggression among spectators. The results showed that although participants from both losing and winning teams tended to commit aggression, losers were more prone to do so, especially during contests of high intensity competition. Aggression occurred mainly during the second half of competitions, most frequently during the last quarter and towards the end of the contest. High intensity competition evoked more cases of aggression than how intensity competition. High combative sport evoked considerably more cases and variations of aggression than low combative sport. Instigation of aggression in sporting settings seems to be a
multiple-factor phenomenon with instigators such as motive blocking, attack, frustration, anger, combativeness and environmental cues operating interactively. It is suggested that future research on aggression in sport should be conducted within the context and characteristics of a specific sporting code due to the large differences across sporting codes, events and types of sport aggression.

Attempts have been made to study the relationship of sport involvement with children Moral Reasoning and Aggression Tendencies. The relationships between sport involvement variables (participation and interest) and facets of children's morality (reasoning maturity and aggression tendencies) were investigated for 106 girls and boys in grades 4 through 7. Children responded to a sport involvement questionnaire, participated in a moral interview, and completed two self-report instruments designed to assess aggression tendencies in sport specific and daily life contests. Analyses revealed that boys' participation and interest in high contact sports and girls participation in medium contact sports (the highest level of contact sport experience they reported) were positively correlated with less mature moral reasoning and greater tendencies to aggress. Regression analyses demonstrated that sport interest predicted reasoning maturity and aggression tendencies better than sport participation. Results and implications form a structural developmental perspective.

The purpose of the study conducted by Hasegawa, E., (1994) was to describe the characteristics of anger-related
aggression in rugby football players and to analyze correlations between several dimensions of responses to the basis of Averills theory of the anger emotion as a response syndrome. 612 rugby players (283 high school students and 329 university students) answered a questionnaire on “the experience of anger toward opponent team players in sport competition.” In this questionnaire they were asked to recall an episode involving intense anger they had recently experienced and to rate it in respect of investigations, motives and responses. The characteristics of anger experiences toward opponent players were that the experiences involved physical injury investigations, relative motives, physical aggression responses much more in competition than in the daily life, and that hostile, instrumental and reproving dimensions were extracted from the motives, and that the experiences included several types of responses such as physical aggression, indirect aggression or non-aggressive response. The analysis of the relations of cognition with the intensity and motives of anger showed that the intensity was affected by the evaluations of the investigation, the casual attribution, and the perception of the opponents hostile intent, and that the motives were differentiated and generated according to the kind of investigation. The relations of the intensity and motives of anger with aggressive behaviours made obvious that the types of directive aggressive behaviours were investigated by intense anger, and that the aggressive behaviours and / or non-aggressive behaviours were differentiated and induced according to the type of motives.
Widmeyer, W.N. and McGuire, E.J. (1997) studied the relationship between frequency of competition and aggression was examined in professional ice hockey. Data on the 9,318 aggressive incidents which occurred in 840 NHL games were collected from official game reports. Aggression in 345 intra-divisional games, where teams played each other seven or eight times, was compared to that in 495 interdivisional games, where teams competed with each other only three times. The 13 measures of aggression were the subject defined aggressive penalties (Widmeyer and Birch, 1978). Results of the MANOVA supported the hypothesis that when teams competed more frequently (intra-divisional) there was more aggression (P is less than 0.001) than when they competed less frequently (interdivisional). Univariate analyses revealed significant differences for fighting, roughing, cross checking, high sticking, elbowing, slashing, and charging (all p< are less than 0.01). In addition it was shown within both intra-divisional and interdivisional competition that aggression increased as the number of meetings between the team increased. Results were seen as supporting sheriff et al’s (1961) inter-group conflict theory. Implications of the effects that unbalanced schedules have on aggression were discussed.

The purpose of this study was to examine the relationships of goal orientations with aggression in male adolescent handball across three institutional sport contexts, Physical Education, Interscholastic, and League (clubs). 30 handball games were videotaped (10 per context) and observed on monitor by means of a grid allowing the distinction between Instrumental (non-
emotional and task-oriented) and Hostile (an emotional response which is an end in itself) aggression. 240 players also completed the “Questionnaire de Perception de Success en Sport”. A main effect of context emerged from 2 separate one-way multivariate analyses of variance for goal orientations and aggression. Univariate F tests and Newman-Keuls post hoc analyses indicated that Ego-goal orientation and Instrumental aggression were significantly higher in the League context than in the other two. Statistically significant positive correlations between measures of Ego-goal orientation and aggression were observed. Discriminant function analysis indicated that strongly Ego-goal classified players displayed more Instrumental aggression than lower Ego-goal classified players. Rascle, O. coulomb, G. Pfister, R. (1998)

Coulomb, Rascle and Pfister (1999) made an attempt to examine (a) the influence of gender and type of sport (handball vs soccer) on aggression and participation motives, (b) the relationships between aggression and participation motives. Sixty organized games (regional level), equally distributed across gender and type of sport, were recorded and then observed by means of specific observational grids, distinguishing instrumental from hostile aggression. Eighty one players also filled the “Questionnaire des Motifs de Participation”. Results reveal that men display more instrumental and hostile aggression than women, but a significant Gender by Type of sport interaction emerges. On the other hand, according to gender, participation motives appear to be more homogeneous, except for the “fun” factor that women consider as more important than men. Negative
correlations arise from instrumental aggression and “social recognition”, “fun” and “skill development”, just as for hostile aggression and “social recognition”.

Ferraro, T. (1999) examined the differences between Asian and American athletes. Using questionnaire data from Asia and the U.S., the author suggests that Asian athletes tend to be more perfectionist, more work oriented, receive more family support, are more family oriented and tend to be less aggressive and less angry. Conversely, the American athlete appears to be more aggressive, less work-oriented, often complains more about practice, have looser family ties, and are less guilty about defeating opponents.

Tucker, L.W. (1999) conducted a study on perceived legitimacy of aggression among female and male collegiate athletes. The purpose of this study was to examine attitudes of female and male Division I inter-collegiate athletes toward aggression in collision, contact, and non-contact sports. Collision sports were defined as those that require heavy bodily contact, such as hockey, football, and rugby. Contact sports were defined as those that involve some bodily contact, such as basketball and soccer. Non-contact sports were defined as those that do not involve any type of physical contact, such as golf, tennis, and swimming. The sample consisted of N=162 intercollegiate athletes, equally divided between females (n = 81) and males (n = 81). The samples were further categorized into three types of sport; collision (n = 28 females and n = 27 males), contact (n = 26 females and n = 27 males), and non-contact (n = 27 females and
The participants completed a three-part questionnaire. Part I was a modified version of the Carolina Sport Behaviour Inventory (CSBI), developed by Conroy Silva, Newcomer, Walker, and Johnson (1996). This questionnaire consisted of 10 aggressive sport. Part II consisted of three questions that measured the influence of social learning on one's acceptance of aggression in sport. Part III consisted of demographics questions. A3 (type of sport) x 2 (gender) analysis of variance revealed that there were significant main effects, both for type of sport and for gender. A Tukey's post hoc analysis determined that a significant difference existed between collision and contact sports. Furthermore, a significant interaction was found between type of sport and genders. The interaction occurred because the difference in scores between male and female non-contact sport participants was greater than the difference in the scores between male and female contact and collision sport participants. None of the six groups of participants had mean perceived legitimacy of aggression scores above 4.5, the threshold of legitimacy (Conroy et al., 1996). Thus, none of the groups could be considered accepting of aggression in sport.

According to Kirker, B. Tenenbaum, G. Mattson, J. (2000), there have been significant problems in the study of sports aggression, and they are linked to how aggression has been defined, measured, and analyzed. Following a review of the whole domain, this study aimed to construct a theoretically coherent and ecologically valid framework for research on processes underlying sports aggression and to contribute to the advancement of knowledge in the area. An explanatory method
using computer observational analysis as the primary research method, along with complementary questionnaires and personal reflections, considered aggression in two comparison sports: ice hockey and basketball. Data were compiled and classified by involved and independent experts relative to factors and behaviours associated with sports aggression derived from a comprehensive review of the literature. Among the study’s findings were that: (a) aggression was instrumental in nature two-thirds of the time; (b) aggressive acts typically occurred in clusters and varied infrequency according to game circumstances; and (c) multiple variables and aggression theories were related to severely aggressive acts. The complex dynamics of sports aggression via similar naturalistic methodologies is discussed.

Purpose of Park, C.J. (2000) study was to test the hypothesis regarding self-esteem mediated effects of Tae Kwon Do training on aggression. To test this hypothesis, 164 Tae Kwon Do practitioners (M = 121, F = 43; CA = 14-63, x =18) were asked to complete self-report questionnaires. Subjects included novice (N = 23), intermediate (N = 45), advanced (N = 46), and expert (N = 50) practitioners. Results showed that ranking, length of training, and frequency of training in Tae Kwon Do did not significantly influence self-esteem and aggression, but self-esteem was significantly increased by perceived competence. This feeling of competence did not, however, translate into learned aggressiveness. As hypothesized, results indicated increased self-esteem was significantly associated with decreased aggression.
Tenenbaum, G. Sacks, D.N. Miller, J.W. Golden, A.S. Doolin, N. (2000) made an investigation in response to Kerr’s (1999) rejoinder to the International Society of Sport Psychology’s (ISSP) Position Stand (PS) on aggression and violence in sport (Tenenbaum, Stewart, Singer and Duda, 1997), this reply refutes Kerr’s criticisms and further advocates the recommendations provided by the ISSP to drastically reduce aggression among athletes and spectators. Specifically, this paper answers Kerr’s (1999) accusations that the PS fails to provide an understanding of the motivation behind aggression in sport, does not distinguish between athlete and spectator violence, makes improper conclusions regarding the media’s influence, and incorrectly blames officials for inflaming aggressive acts. Support is offered to vindicate the PS. The example cited by Kerr to discredit the PS recommendations is shown to be congruent with the ISSP’s suggestions for reducing aggression and violence in sport. Readers are urged to approach with caution arguments that consider aggression an essential component of sport, as such views increase the risk of injury among participants and spectators. Additional suggestions for reducing the incidence of aggression and violence in sport are invited.

**COHESION**

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

Melnick and Chemers (1974) used the sports cohesiveness questionnaire developed by Martens and Peterson (1971) and followed similar procedures, but reported no relationship between pre-season cohesiveness and team success. Not only have researchers sometimes failed to find a positive relationship, but significant negative relationships have been reported for high school basketball, (Landers and Luschen (1974), McGrath (1962) and Lenk (1977). The case for positive relationship is further weakened when one notes that many of the reported positive relationships actually represent mixed results, with positive relationships holding only for selected measures or certain times, within the overall design.

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

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

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

Carron and Ball (1977) conducted a study on the athletes in which 12 inter-collegiate ice hockey teams were tested with the sports cohesiveness questionnaire in the early, mid and post-season and the stability of individual differences in the seven measures were examined. From one immediate test period to the next i.e. early-season to mid-season and mid-season to post-season, all seven individual measures evidenced a relatively higher stability. However, when the early season cohesion measures were correlated with the post-season measures, only
three measures (friendship, power influence and value of membership) were of significant magnitude to be statistically significant. In short, individual differences which were present in early season in the two individual to individual measures and one individual to team measure, were not greatly influenced by a season of competition. Individual differences in these three attraction measures were established early in the season and they remained stable. On the other hand, during tenure of that season, individual differences in the degree of enjoyment, sense of belonging, closeness and team work changed markedly and there was no stability in these attraction measures. Presumably, the different levels of success and failure experienced throughout the season produced marked changes in these measures.

Carron, Ball and Chelladurai (1977) examined the effects of individual orientation (task, self and Affiliation motivation) and team success in inter – collegiate hockey on satisfaction with individual and team performances. Differences in success and individual orientation did not have any effect upon the level of satisfaction expressed with individual performance. However, in a finding consistent with that reported by Martens (1970), team success for an individual, with increased levels of task motivation, led to heightened levels of satisfaction with team performance.

Bass (1980) has stated that the conduciveness of homogeneity or heterogeneity within the group membership to team performance depends upon the variables on which the members are the same or different and the nature of the task. For example, if the task is a simple one and a variety of resources are
not essential for performance success – stuffing envelopes for mailing, for example – then the homogeneous team is likely to be effective independent of whether cliques develop, members differ in ability, and so on.

In situations where the group must work in a chain, then the total chain depends upon the adequacy of each link, that is, in sport, relay races, the tug-of-war, and rowing events. Bass suggested that “again homogeneity is favoured, for the group is no better than its poorest member. The chain fails if one link fails”. The relevance of this conclusion for sport might be questionable, however, because four “homogeneous” plodders would be certainly hard pressed to defeat two plodders and two Olympic sprinters in a relay. Finally, according to Bass, heterogeneity should prove to be more beneficial when the task is complex, when no individual alone has the varied resources necessary to deal with the complex problem.

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

Defiore and Kramer (1982) studied the effect of team affiliation on the perception of sports. 60 female high school students participated in a study designed to determine the effect of social – psychological factors on perception in sports. The subjects of each of the three schools were randomly assigned to one of the two conditions. The instructions in objectivity conditions (NIO) required no manipulations, in that, the subject’s affiliations, as indicated by the pre-test questionnaire, were not supplemented by instructions. ‘The instructed objectivity’ conditions (IO) however, attempted to manipulate the subject’s affiliation by supplementing the direction with the statement of the possibility of bias, accompanying affiliation and instructing the subject to be objective in an attempt to improve their perceptions. Three dependent variable measures were collected and analyzed. The result of the study distinctly provides evidence for
the functioning of social – psychological factors in the realm of sports. Such findings are of a value as a contribution to the knowledge surrounding social perceptions by providing systematically collected data in the area of sports where there has not been collected data in the past. Among all the three dependent variables, the school affiliation factor was found to account for differences in subject’s perceptions. The affiliated team more frequently received the favourable decision when compared to the control group.

Carron et al. (1985) developed an instrument to assess cohesion in sport teams. The purpose of the study was firstly, to demonstrate the need to develop an instrument to assess group cohesion, secondly, to outline conceptual model of group cohesion upon which such an instrument could be based, thirdly, to outline the four projects conducted to obtain the construct related information and to develop an initial version of the G.E.Q. and the final purpose was to outline the reliability and validity of studies conducted with two different sport team samples. A total of 234 respondents from a variety of sport teams were the subjects. The most consistently appearing responses were tabled, taking care to analyze the subjects on their wording, then coded accordingly as to whether the responses concerned one of the four constructs. In all, there were four projects. The responses from the four projects were used to form a response pool representing information concerning the four constructs. On the basis of the various statistical operations required to construct an instrument, 18 items version of G.E.Q. was found consistent and reliable. Cross studies and content – valued – factor analysis with
oblique rotation revealed preliminary evidence for construct validity. The G.E.Q. comprised four scales, reflecting the constructs of 'Group Integration – Task', 'Group Integration – Social', 'Individual Attraction to the Group – Task' and 'Individual Attraction to the Group – Social'.

Phillips (1985) conducted a study of sports group behaviour and official's perception, the percentage of negative behaviour was exhibited towards male basketball officials, by crowd, coaches and players at Ottawa High School. For girl basketball game officials perception of negative behaviour exhibited towards them, 15 girls high school – varsity basketball games were observed and 5 trained observer related behaviours of each sport sub-group, crowd, home coaches, visiting coaches, home players and visiting players were observed. It was concluded that sport sub groups, crowd, coaches and players in Ottawa High School girls' basketball behaved generally non-negatively toward officials. Crowd, however, did behave significantly more negatively than did coaches or players. Officials did not perceive behaviour exhibited by crowd, coaches and players nor did they evaluate their officiating ability based on the reaction of crowd, coaches and players. Official seemed to have a pre-conceived notion as to how crowd, coaches and players would behave towards them and evaluate their officiating ability. The results seemed to represent an official's expectations of behaviour and evaluation of officiating ability rather than actual behaviour or evaluation of officiating ability by crowd, coaches or players.
Brawley et al. (1987) assessed the cohesion of teams and examined the validity of the G.E.Q. (concurrent, predictive and construct). In study one, subjects were 74 male and female athletes from 10 university teams and individual sports. Each team included a mixture of freshmen and senior students. Teams were assessed at different points during their season, thus avoiding a seasonal response bias. In study two, there were 247 athletes from 12 male and 14 female teams. Out of these 26 teams in total, 16 were from individual sports, while 10 were from team sports. Teams varied in tenure of their membership. In study three, there were 117 subjects from 10 team sports. The results of study one, indicated that the G.E.Q. exhibited the predicted co-response with similar measure of cohesion and was not significantly correlated with measures of other constructs. In study two, the G.E.Q. successfully discriminated team and individual sport athletes by predicting their membership to these groups on the basis of their task cohesion scores. In study three, evidence was obtained for the predicted difference in self response attributions between high and low task cohesive athletes of team sport. The conclusion was that the G.E.Q. was valid.

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

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

Spink (1990) examined the cohesion/efficacy relationship. Specifically, it was hypothesized that volleyball team, high in collective efficacy about impending encounter, would be more cohesive than teams that were low in collective efficacy. These teams, high in collective efficacy could score higher on the task scales of the G.E.Q., especially, individual attraction to group-task (Widmeyer, Brawley and Carron, 1985). The subjects for this study were 92 volleyball players participating in the open (N = 53) and senior division (N = 39) of the Annual Super Volley Tournament held at a major University in Canada. Subjects were selected from both the men's and women's section of tournament. To assess team cohesion, the four scale Group Environment Questionnaire developed by widmeyer et al. (1985) was used. A stepwise discriminant analysis was used to determine which cohesion scores contributed to a function that would predict classification of high and low collective efficacy of
elite volleyball players. The result of analysis revealed a highly significant difference between high and low collective efficacy players participating in the open division $\chi^2 (2, N = 53) = 18.06, p < .001$. Two of the four cohesion scales contributed to the significant differentiation between the groups: ATG – T and GI – S. post Hoc univariate FS conducted on each variable, that contributed to the discriminant function classification, revealed that both ATG – T, $F (1,51) = 14.53, p < .001$, and GI-S, $F (1,51) = 7.80, p < .01$, contributed significantly to the differences between high and low collective efficacy elite players. The mean values indicated that both ATG – T and GI – S were greater for team members who were high in collective efficacy. The result supported the conclusion that specific measures of group cohesiveness were positively related to collective efficacy for elite volleyball team but not for recreational teams, with the high collective efficacy teams rating cohesiveness higher. This suggests the need for future research to address the cohesion / collective efficacy question from a comparative perspective.

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

Nirmaljit (1992) examined the relationship of team cohesion, adjustment and achievement motivation to performance and gender in team sports. The sample consisted of 320 male and female athletes (with age group of 17 to 23 years) representing team sports at the college and university levels in the games of basketball, volleyball, hockey and handball. The G.E.Q. (Group Environment Questionnaire, Widmeyer, et al., 1985) was used to measure all the dimensions of ‘team cohesion’, the adjustment inventory for college students (Sinha and Singh, 1980) was used to measure all the area of adjustment, to measure achievement motivation, the sports achievement motivation test developed by Kamlesh (1990) was used. Analysis of variance (2x2) ANOVA was applied to analyze the data. The results indicated (i) the university athletes were found significantly better than the college athletes on the variable individual attraction to the Group-task (p<.01), Group-social (p<.01), Group Integration-task (p<.05). However, no significant difference was found between the college and university athletes on the variable Group Integration-social. While male athletes were found better on GI-social, the female athletes were found significantly different.
on the variable Gl-task. There was a significant inter-action effect 
(performance x gender) on ATG-social, Gl-task and Gl-social 
variables of cohesion. (ii) The university athletes were found 
significantly different from the college athletes on social, 
emotional and total adjustment. The male athletes were found 
better adjusted than the female athlete except from home 
adjustment. (iii) The university athletes were significantly higher 
on sports achievement motivation as compared to the college 
athletes. However, there were no significant differences between 
the male and female athletes on sports achievement motivation 
variable. Similarly, the performance x gender interaction effect on 
this variable was also not significant.