Chapter - II

REVIEW OF RELATED LITERATURE
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Research in peak performance and ideal sports performance is still in its relative infancy. However, there is sufficient evidence from retrospective studies to suggest that a number of psychological skills may contribute to peak performance. (Goulds, et.al. 1987, Mohaney et.al. 1987, Vealey, 1988). P Skills are psychological characteristics such as anxiety control and concentration that can be improved through practicing. Consequently, psychological skills training (PST) programme have flourished since 1980’s. Regards less of the age or skill level of the athletes, individuals who have weak psychological skills will benefits from PSTs and inclusion of particular areas is somewhat arbitrary depending on the experience of the individual (Seiler, 1992). Coaches with information use self-confidence, mental imagery, performance analysis, goal setting, and token reward for motivation in practice sessions. Goulds, 1990, offered a PST programme to elite wrestlers which included relaxation, visualization / imagery, goal setting and mental preparation techniques. They also noted that there was a agreement among sports psychologists working with Olympics athletes who were asked to list those areas considered important. I consequences obtains the areas as goal setting, relaxation training, arousal regulation, imagery and self-talk skills.

The researcher has made every effort to go through the literature related to the problem in the game of Baseball and its psychological implications wherever available. However, it was felt that a very few specific studies have been done in this field. For the purpose of review work, libraries of IGIPESS, SAI, LNUPE, IOA etc. were made use of. Whatever the studies, the investigator could lay his hand on are given in this chapter. There are two types of studies in Review of Literature- Directly related to the competitive sports and Peripheral studies.

Mahoney (1987) assessed psychological skills relevant to exceptional athletic performance; a 51-item questionnaire was administered to a national sample of 713
male and female athletes from 23 sports. The athlete sample comprised 126 elite competitors, 141 pre elite athletes, and 446 non elite collegiate athletes. Sixteen leading sport psychologists also completed the questionnaire as they thought the ideal athlete might. Omnibus, individual item, discriminant, regression, factor, and cluster analyses all revealed significant differences among the athlete subsamples. The themes of concentration, anxiety management, self-confidence, mental preparation, and motivation were seen to have potential importance in skill-level differentiation, although age-difference confounds as well as gender and sport differences may have been involved. The ideal profile constructed by the sport psychologists generally paralleled the skill differences encountered, although the elite athletes did not report selected amplitudes in the profile. Compares the psychological skill profiles reported by elite athletes with those predicted by sport psychologists in their depiction of the ideal athlete. Male and female athletes (n=713) from 23 sports respond to a 51-item questionnaire (the Psychological Skills Inventory for Sports) intended to assess five broad themes: anxiety measurement, concentration, self-confidence, mental preparation, and team emphasis. Sixteen leading sport psychologists also complete the questionnaire as they think the ideal athlete might complete it. Finds significant differences among elite, pre-elite, and non-elite collegiate athletes. The ideal profile constructed by the psychologists generally parallels the skill differences encountered, although the elite athletes did not report selected amplitudes in the profile.

Ptacek (1995) discusses the development of the Athletic Coping Skills Inventory-28, by using confirmatory factor analysis (CFA). In Study 1, exploratory factor analysis of the original ACSI (87-item) administered to 637 athletes led to a 42-item version based on 8-factor structure. In Study 2, CFA of the 42-item ACSI was conducted using separate male and female subsamples and a final 28-item version of ACSI was developed. The factorial validity of this was established as 7 of its subscales conformed to the underlying factor structure for both male and female athletes. Correlation of ACSI-28 with measures of coping skills and self-efficacy further confirmed its convergent and discriminant validity. Research studies relating ACSI-28 to performance measures indicate predictive accuracy of ACSI in identifying overachievers, and suggest physical and psychological skills to be independent in predicting performance.
Danish (1992) examined selected psychometric properties of the Psychological Skills Inventory for Sports (PSIS) Form-5, which contains 45 items designed to measure 6 psychological skills related to athletic performance. 340 intercollegiate athletes completed the PSIS. The predicted 6-factor model did not fit the data. Model modifications were examined but failed to provide an adequate fit. Internal consistency estimates for 5 of the 6 scales also showed poor reliability. Careful evaluation of the psychometric characteristics of the PSIS is recommended.

Hardy (1999) reported the initial stages of validation of the 64-item Test of Performance Strategies, a self-report instrument designed to measure the psychological skills and strategies used by athletes in competition and during practice. Data were obtained from a sample of 472 athletes competing across a range of performance standards in a wide variety of sports. Exploratory factor analyses of their responses produced eight competition strategy subscales and eight practice strategy subscales, each consisting of four items. Internal consistencies of the subscales ranged from 0.66 to 0.81 (r=0.75). Correlations among strategies were examined within and between performance contexts. Subgroups defined by age, sex and current standard of performance in sport differed significantly in their psychological skills and strategies.

Christensen (1995) evaluated the role of psychological and physical skills in predicting performance and survival in sport, in 104 minor league professional baseball players, self-assessments, and perceptions of their instructors and managers on measures of their psychological skills were obtained using the Athletic Coping Skills Inventory (ACSI; R. E. Smith et al, 1995) and the ACSI rating form. Performance and physical skill measures were obtained in terms of batting and pitching means and overall organizational ratings of each S. Results show both psychological and physical skills to be independent predictors of athletic performance, and survival after 2 and 3 years in professional sports. Among individual subscales of ACSI-28, confidence and achievement motivation were the most consistent predictors of both batting and pitching performance. These findings indicate that psychological skills account for significant amounts of athletic performance variance.

Liu (1993) studied the relationship between sport, nationality, and gender and psychological skills of 158 American and 192 Chinese collegiate level athletes participating in track and field, basketball, volleyball, or swimming. Ss completed the
Psychological Skills Inventory for Sports. A multivariate analysis of variance (MANOVA) resulted in significant main effects for nationality, sport, and gender and for the interactions between nationality and sport and between sport and gender. Overall, male Ss displayed higher psychological skills scores than did female Ss. Chinese Ss displayed higher psychological skills scores than did American Ss in confidence, motivation, and total psychological skill. Ss enjoying the highest level of psychological skill were the male volleyball players, and in many cases the male Chinese volleyball players.

Qui (1996) conducted two investigations to test the hypotheses that (a) elite Chinese athletes participating in the sports of track and field, fencing, and gymnastics exhibit differential psychological profiles; and (b) elite Chinese athletes participating in track and field exhibit superior psychological skill profiles when compared with collegiate level Chinese track and field athletes. Subjects were 83 elite Chinese athletes competing for the People's Republic of China in 3 individual sports, and 94 collegiate Chinese athletes competing in track and field. Psychological skills were assessed with the Psychological Skills Inventory for Sports (PSIS R-5). MANOVA and follow-up univariate analyses revealed significant relationships between psychological skills and the factors of sport played, gender, and level of play. Elite Chinese male track and field athletes and female gymnasts exhibited motivational scores that were significantly lower than other sport/gender categories of athletes. Similarly, elite male Chinese track and field athletes displayed team emphasis scores that are lower than those displayed by elite female track and field performers, female fencers, and male gymnasts. Elite Chinese track and field athletes (regardless of gender) exhibited higher anxiety control and confidence scores than collegiate level athletes.

Ptacek (1990) conducted a research relating to vulnerability and resilience factors, single moderator variables have typically been the focus of study. Little is known about the ways in which moderator variables may interact with one another to increase vulnerability or resilience. We propose a distinction between conjunctive moderation, in which multiple moderators must co-occur in a specific combination or pattern to maximize a relation between a predictor and an outcome variable, and disjunctive moderation, in which any one of a number of moderators maximizes the predictor–criterion relation. Our results indicate that social support and psychological
coping skills are statistically independent psychosocial resources and that they operate in a conjunctive manner to influence the relation between life stress and subsequent athletic injury in adolescents. Only athletes low in both coping skills and social support exhibited a significant stress–injury relation, and in that vulnerable subgroup, negative major life events accounted for up to 30% of the injury variance. Methodological considerations in the assessment of conjunctive moderator effects are discussed.

The purpose of Yoo (1995) study was to investigate the relationship between selected psychological skills and playing position of American football players. Subjects were 43 Division 1 intercollegiate football players from a large Midwestern university in the USA. They were grouped as a function of team (offence or defence) and position (line or backfield). Athletes completed the Psychological Skills Inventory for Sports (PSIS R-5). Data were analyzed to determine the relationship between the independent variables of team and position with the dependent variable of psychological skill. The MANOVA for the psychological skills data resulted in a significant player position main effect, and a significant interaction between team and player position. Follow-up univariate ANOVAs revealed significant differences between line and backfield players for anxiety control, concentration and confidence. Differences were also observed between offensive and defensive players for the psychological skill of anxiety control. The ANOVA on the motivation psychological skill variable resulted in a significant team by position interaction. The most consistent observation was that a difference in psychological skill exists between linesmen and backfield players, regardless of team (offence or defence). Backfield players tend to score higher than linesmen on measured psychological skills.

White (1993) examined the psychometric properties of the Psychological Skills Inventory for Sport (PSIS), the relationship between PSIS, experience, practice commitment, and gender of collegiate skiers was also examined. 74 male and 54 female collegiate skiers responded to the 45-item PSIS. Overall, the 6 PSIS subscales (anxiety, concentration, confidence, mental preparation, motivation, and team emphasis) demonstrated acceptable internal reliability. Female collegiate skiers were more team oriented than male collegiate skiers and placed more importance on the social and affiliative aspects of being on a team than did their male counterparts.
Skelly (1997) studied various psychometric inventories including the Profile of Mood States (POMS), the Sports Attitude Inventory (SAI), the Sport Competition Anxiety Test (SCAT), the Controlled Repression-Sensitization Scale (CR-S), Levenson’s Locus of Control (LOC), the Eysenck Personality Inventory (EPI), and the Psychological Skills Inventory for Sport (PSIS) were administered to 22 male and 21 female telemark skiers from the USA. The data were analyzed using multivariate analysis of variance (MANOVA) by skill level (expert, extreme) and gender. Males exhibited significantly less anxiety management but greater self-confidence than females across psychological skills. Telemarkers displayed lower tension, depression, anger, confusion, total mood disturbance, and higher vigour compared to normative. The subjects displayed similar mood states and psychological skills associated with athletes in other sports.

Weinberg (1981) investigated 49 college wrestlers competing in the 1980 Big Ten championship tournament completed a psychological skills inventory assessing psychological factors used in training and competition. The relationships between 22 cognitive variables and 2 performance measures (tournament placement and seasonal win–loss record) were examined. Findings reveal that self-confidence, maximum potential, and use of attentional focusing were the most important variables separating the groups. Specifically, successful Ss as compared to less successful Ss were more self-confident, indicated that they were closer to achieving their maximum wrestling potential, and more frequently focused their attention only on wrestling-related thoughts prior to competition. Unlike the previous studies, few differences in anxiety level or in coping responses to anxiety were evident between the successful and less successful Ss.

Peterson (2012) hypothesized that players of different levels of play might differ not only in their football skills but also in their way of playing football and with respect to psychological factors such as concentration, reaction time, or competitive anxiety. The psychological characteristics of a player might influence his way of playing football (in particular with respect to fair play) and also his risk of injury. A group of 588 football players were studied by questionnaire; additionally, reaction time tests were performed. Psychological characteristics were assessed by three established self-evaluation questionnaires: the Athletic Coping Skills Inventory, the State Competitive
Anxiety Test, and the State-Trait-Anger-Expression-Inventory. Football-specific characteristics that were investigated included playing experience and positions played, style of play, number of training hours and games, as well as aspects of fair play. Reaction time was tested twice: without the influence of physical exercise and immediately after a 12-minute run. A significant reduction in reaction time was observed after physical exercise. In high-level players, the reaction time immediately after the 12-minute run was significantly shorter than it was in low-level players. The questionnaire answers given regarding fair play clearly indicated that fair play is not paid sufficient respect. The relationship between psychological characteristics and attitudes toward fair play was analyzed and discussed.

Moffett (2002) designed to examine psychological characteristics and their development in Olympic champions. Ten U.S. Olympic champions (winners of 32 Olympic medals) were interviewed, as were one of their coaches (n = 10), and a parent, guardian, or significant other (n = 10). A battery of psychological inventories was also administered to the athletes. It was found that the athletes were characterized by: (a) the ability to cope with and control anxiety; (b) confidence; (c) mental toughness/resiliency; (d) sport intelligence; (e) the ability to focus and block out distractions; (f) competitiveness; (g) a hard-work ethic; (h) the ability to set and achieve goals; (i) Coach ability; (j) high levels of dispositional hope; (k) optimism; and (l) adaptive perfectionism. Results also revealed that a number of individuals and institutions influenced the athletes' psychological development including the community, family, the individual himself or herself, non-sport personnel, sport environment personnel, and the sport process. Coach and family influences were particularly important. Ways in which these sources influenced the athletes were both direct, like teaching or emphasizing certain psychological lessons, and indirect, involving modeling or unintentionally creating certain psychological environments. Psychological characteristic findings verified current sport psychological research on psychological characteristics associated with peak performance (Williams & Krane, 2001). They also suggest that adaptive perfectionism, dispositional hope, and high levels of optimism are new variables to consider. Results are also discussed relative to Bloom's (1985), Côté's (1999) and Csikszentmihalyi, Rathunde, Whalen, and Wong's (1993) talent development research. Practical implications focus on implementing
parenting and coaching practices related to the development of psychological characteristics associated with athletic success.

The purpose of Haslam (2008) study was to investigate the motivational and cognitive use of imagery by soccer players of various skill levels. The instrument developed and employed in this study was the Imagery Use Questionnaire for Soccer Players (IUQ-SP). It was based on the original IUQ developed by Hall, Rodgers and Barr (1990) and, in part, on Paivio’s (1985) framework of how imagery functions in motor skills. The items examined when players use imagery and whether or not it is used to assist with game strategies, individual skills, motivation levels and goal-oriented responses. The questionnaire was completed by 362 players at the national, provincial and local levels. The results from the questionnaire indicated that soccer players tended to use imagery more in conjunction with competition than training. Players also reported using imagery more for its motivation function than its cognitive function. In general, the elite athletes reported employing more imagery than non-elite athletes regardless of the function imagery served.

Gray (2007) addressed the question, what should baseball players focus their attention on while batting? Less-skilled and highly skilled (college) baseball players participated in four dual-task conditions in a baseball batting simulation: two that directed attention to skill execution (skill/internal [movement of the hands] and skill/external [movement of the bat]) and two that directed attention to the environment (environmental/irrelevant [auditory tones] and environmental/external [the ball leaving the bat]. Batting performance for highly skilled players was best in the environmental/external condition and worst in the skill/internal condition. Performance of less-skilled batters was significantly better in the two skill conditions than in either of the two environmental conditions. We conclude that the optimal focus of attention for highly skilled batters is one that does not disrupt procedural zed knowledge and permits attention to the perceptual effect of the action, whereas the optimal focus of attention for less-skilled batters is one that allows attention to the step-by-step execution of the swing.

Meyers, et. al., (1994) the opportunity to achieve maximal athletic performance through the use of sound physical training programs and testing procedures has continued to gain acceptance from coaches and players at various levels of
Ten collegiate rodeo programs were randomly selected among 105 programs sanctioned by the National Intercollegiate Rodeo Association (NLRA). Universities were contacted by phone and subsequently all coaches and athletes agreed to participate in this study by Meyers et al (1996). These teams represented 7 of 11 regions and ranked anywhere from first to last in their respective regional standings. Psychological skills relevant to sport were evaluated in 215 college athletes (mean age 20.4[+ or -] 1.5yrs; 149 males, 66 females). Mean number of seasons of rodeo participation among this group was 7.9[+ or -] 2.2 years, with equal years of experience between gender. The athletic backgrounds of subjects used in this study included former/present national, state, or regional collegiate/high school champions involved in only one category of competition.

Thomas and Forgatty (1997) conducted a study on Psychological skills training in golf. Adult male (N = 17) and female (N = 15) golfers of varying abilities from two golf-clubs in South Queensland, Australia, participated in imagery and self-talk training sessions over a period of two months. Changes in factors measured by the Golf Performance Survey (negative emotions and cognitions, mental preparation, automaticity, putting skill, and seeking improvement), and a golf-adapted version of the Sport Imagery Questionnaire (ratings of imagery and self-talk techniques) served as dependent variables. An Evaluation Questionnaire was also devised to assess opinions about the training experiences. A golf-skills test that measured hitting accuracy at various distances, and actual handicaps served as performance measures at the beginning, mid-point, and end of the study. The Golf Performance Survey was administered at the beginning and end of the study. Some factors at the end of the experimental period were significantly changed to those at the beginning, with negative emotions and cognitions diminishing, and seeking improvement and putting skill increasing. The Sport Imagery Questionnaire was administered during the first imagery training session and a week after the second (final) training session. There was a significant improvement in both knowledge and application of imagery and self-talk techniques. Handicap decreased marginally, but significantly over the duration of the investigation. Significant improvements of slightly more than 20% occurred in the hitting skills test. There were few who exhibited a preference for either imagery or self-talk, both being highly correlated. In general, there were improvements in psychological skills that were accompanied by improvements in golf.
Neil, et. al. (2004) conducted a study on Psychological Skills Usage and the Competitive Anxiety Response as a Function of Skill Level in Rugby Union; this study examined the intensity and direction of competitive anxiety symptoms and psychological skill usage in rugby union players of different skill levels. Elite (n=65) and non-elite (n=50) participants completed measures of competitive anxiety, self-confidence, and psychological skills. The elite group reported more facilitative interpretations of competitive anxiety symptoms, higher levels of self-confidence, lower relaxation usage, and greater imagery and self-talk use than their non-elite counterparts. The findings suggest that non-elite performers primarily use relaxation strategies to reduce anxiety intensity. In contrast, elite athletes appear to maintain intensity levels and adopt a combination of skills to interpret symptoms as facilitative to performance. Potential mechanisms for this process include the use of imagery and verbal persuasion efficacy-enhancement techniques to protect against debilitating symptom interpretations.

Cox (1995) studied the relationship between selected psychological skills and playing position of 43 American football players. Ss were grouped as a function of team and position. Responses from the psychological skills inventory for sports were analyzed to determine the relationship between the independent variables of team and position with the dependent variable of psychological skill. Analyses revealed significant differences between line and back players for anxiety control concentration and confidence. Significant differences were observed between offensive and defensive players for anxiety control the most consistent observation was that a difference. In psychological skill exists between linesman and backfield players, regardless of team (offence/defence).

Meyer, (1966) administered a study on the psychological skills inventory for sports (PSIS) to 149 male and 66 female collegiate Rodeo athletes and performed multivariate analysis of variance (MANOVA) by events gender, nature of competition and athletic skill level. Psychological constructs identified by the PSIS included anxiety management, concentration, confidence, mental preparation, motivation and team emphasis. Wilkes's criterion indicated to significant differences in psychological skills across events. Males scores significantly higher in anxiety management,
concentration and confidence than did females highly skilled Ss scored significantly higher in anxiety management, concentration, confidence and motivation than did lower skilled Ss collegiate rodeo athletes exhibit psychological skills patterns inconsistent psychological skills may enhance predictions of athletic potential in this sports.

Michelle (2006) conducted study on sport psychological skills that distinguish between u/19 club rugby players of different participation levels and positional groups. For the purpose of the study One hundred and eighty u/19 rugby players from the PUK Rugby Institute (average age: 18.79 ± 0.28 years) were tested during the 2003-2005 rugby seasons by means of the Competitive State Anxiety Inventory-2 (CSAI-2), Psychological Skills Inventory (PSI), Athletic Coping Skills Inventory-28 (ACSI-28), as well as a questionnaire dealing with psychosocial factors influencing participation and performance in rugby. Players from the 2004 and 2005 seasons (n=120) were first divided into two groups (top- and lower ranked players) of 60 players each. Effect size results (practical significance) revealed moderately significant differences between the two groups, with the top ranked players outscoring their lower ranked counterparts in self-confidence, general coping resources, coping with adversity, average psychological skills score, as well as the effect of team members/team spirit, coaches and financial aspects on participation and performance. These results confirm that sport psychological skill levels and related psychosocial factors can distinguish between rugby union players of different participation levels. Secondly, the total subject group (n=180) was divided into seven positional groups (props, hookers, locks, loose trio, half-backs, centers and back three). These groups were compared by means of effect sizes (practical significance) for each of seven sport psychological skills as measured with the PSI. Moderate (46) and large (20) practically significant differences were reported for the 147 inter-positional comparisons. The results show that the half-backs and hookers consistently outperformed the other three positional groups, while the props, locks and back three often showed the lowest skill levels. While these results are discussed in reference to practical implications for future position specific sport psychological skills training sessions, they clearly show that sport psychological skill levels differ from one position to another.
Thiese (1999) conducted a study on The Use of Psychological Skills by Female Collegiate Swimmers. The main purpose of the present study was to investigate the use of psychological skills by female collegiate swimmers. A secondary purpose was to investigate use differences between athletes specializing in different swim events. Female collegiate swimmers (N = 147) from ten Midwestern universities were surveyed with a researcher-generated questionnaire, the Athlete's Mental Survey. The means indicated that goal setting, positive self-talk, and music for psych-up were the skills found to be utilized "almost always" by the subjects. Also, more than 50% of the sample reported "never" using autohypnosis, autogenic training, blank meditation, bracing, colour, cue words, mantra meditation, and Transcendental Meditation (C). The sample was split into two groups including sprinters (n = 105) and long distance swimmers (n = 42). MANOVA showed no significant differences between the skills used by the swimmers and the distance swam by the athletes. Results are discussed in relation to the need for coaches to educate and encourage athletes' use of psychological skills for performance enhancement.

Razeena (2009) conducted a study on sports specific psychological skill among national level sportspersons, the purpose of the investigation was to compare psychological skills among national level sports persons. The study was conducted on 300 national level sportspersons belonging to different sports disciplines. The subjects included 180 male and female sports persons belonging to individual sports (track and field, swimming and weight lifting) and 120 male and female sports persons belonging to team sports (hockey and volley ball). The psychological variables assess using the psychological skills inventory for sports (PSIS) (Mahoney et al, 1987) were anxiety control, concentration, confidence, mental preparation, motivation and emphasis upon team goals. To compare the differences between individual and team sportspersons in PSIS, the ‘t’ test was applied. The findings revealed significant differences in concentration and emphasis upon team goals among individual and team sports in male and female category. No significant differences were found for the comparisons for the other variables namely anxiety control, confidence, mental preparation, motivation.

Heiby, et.al., (1987) explored the concurrent and construct validity of self-motivation with the intention of clarifying the characteristics being measured by the SMI scores.
are expected to be (a) positively related to regular exercise, (b) negatively related to anxiety and depression, (c) positively related to self-reinforcement, (d) positively related to accepting responsibility for health while negatively related to attributing health factors beyond one’s control, and (e) positively related to reporting to be motivated to exercise. Data was collecting on 220 volunteers from Honolulu Marathon Clinic multiethnic membership (totaling 500) who was subsequently involved in a 9-month adherence study. The results of this study provide concurrent and construct validity support for the Dishman Self-Motivation Inventory with members of a marathon clinic. Concurrent validity is provided from the significant relation between SMI scores and reports of engaging in regular exercise and having the motivation required for an exercise regimen. Construct validity is derived from the positive relation between self-motivation and self-reinforcement/reward scores, and from the negative relation between self-motivation scores and measures of anxiety and depression. Additional construct validity is provided from the relation of health beliefs to self-motivation.

Deeter (1998) the sports oriented questionnaire (SOQ) was developed as a multidimensional, sport-specific measure of individual differences in sport achievement orientation. Exploratory and confirmatory factor analyses revealed a stable, three-factor structure across three separate samples of university and high school students. The three separate but related subscales of competitiveness, win and goal orientation demonstrate high internal consistency and stability over time. The SOQ competitiveness score differentiates students in competitive activities from those in non-competitive activities, providing evidence for construct validity. The overall factor stability, reliability and validity evidence suggests that the SOQ can be a valuable measure for the investigation of competitiveness and achievement behaviour in sport and exercise setting.

Jin (2000) assessed the factorial construct validity of the culturally-specific coping scale for Korean athletes (CSKA) by attempting to confirm the hypothesized first-and second-order factor structures. Based on previous coping literature, the coping scale yielding with the four coping styles (problem-focused, emotion-focused, avoidance, and transcendent coping), in response to various stressors commonly experienced in sport situations. Data was collected from 411 competitive Korean athletes (234 males
and 177 females). The results of confirmatory factor analyses revealed that the data fit the hypothesized first-order four-order and second-order two-factor models of the CSKA reasonably well. These results suggest that the CSKA possesses adequate factorial validity useful to measure the coping styles of Korean athletes.

**Nathalie (1997)** conducted a study on Development and Validation of the Multidimensional Sportsmanship Orientations Scale. For the purpose of the study 362 amateur athletes with a mean age of 14.4 years were selected as subjects. For the collection of the data 25-item version of the MSOS was administered. The confirmatory factor analysis was employed for the data analysis. Results revealed the presence of univariate normality as indicated by the values of skewness (value ranged from -1.32 to +1.69) and kurtosis (values ranged from -1.48 to +2.02). The multivariate normality was supported by the Mardia’s normalized estimate (11.56). Results from the CFA revealed that the five-factor model provided an acceptable fit for the data, $X^2 (265, N=362) =532.53, p<.001, CFI=.90, BBNFI=.89$.

**Saaramann (2002)** conducted a study on effects of an abbreviated mental skills training program on imagery in track and field. The purpose of this investigation was to assess the impact and retention of an abbreviated mental skills training program on imagery ability across participants within the sport of track and field. 3 subjects were selected for the study. The direct effect of a mental skills training program on producing measurable change in imagery ability, without measuring other effects, was assessed. A multiple baseline design segmented into three phases was implemented for the study. Each study phase for each participant was initiated by the administration of the Movement Imagery Questionnaire-Revised test (MIQ-R). The intervention phase for each participant consisted of the completion of adaptations of imagery exercises. Upon completion of training, the participant retook the MIQ-R to assess if a change in imagery ability had occurred according to the set criterion. The retention phase for each participant consisted of retaking the MIQ-R to assess the retention of learned imagery skills. All three participants improved in imagery ability after the intervention. The two participants for whom retention data were gathered demonstrated retention of improvements.

**Dewiggins (2002)** conducted a study on Effectiveness of Mental Skills Training in College Female Track and Field Athletes. The purpose of this study was to assess the
impact and retention of an abbreviated positive thinking mental skills training program across participants within the sport of track and field. 3 subjects were selected for the study. Instead of measuring performance related effects, this study's intention was to report the direct effect of the training on producing measurable changes in the capacity embraced by the mental skill exercises. The subscales of the Achievement Motivations Scale for Sporting Environments (AMSSE) were used to indicate changes in the positive thinking within a participant's sport environment. Three participants completed the AMSSE to establish a baseline value. Each participant completed tasks and worksheets of three mental skill exercises aimed at learning to accentuate positive thinking in their sport. Each participant was allotted 3 weeks for involvement in the exercises. The multiple-baseline design was staggered so that only one participant received the experimental intervention at a time. Each participant received the intervention exercises and completed the AMSSE test on four separate occasions. Analysis of the data indicated that an abbreviated positive thinking mental skills training program accelerated the positive thinking for two of the participants. The experimental effects were maintained above baseline values for the remaining testing stages, demonstrating retention effects of the intervention. The absence of an experimental effect for the third participant may have related to the occurrence of an influence from another source.

Carlson, et. al., (2005) the present paper describes the development of a scale to measure emotional reactivity. The Emotional Assessment Scale (EAS) consists of 24 emotion descriptors. Subjects rated the intensity of emotion on a 10-cm visual analogue scale. The first study evaluated psychometric properties of the scale by administering the EAS, Profile of Mood States, State-Trait Anxiety Inventory, and Beck Depression Inventory to 120 college students. Reliability and validity of the EAS met established guidelines. The second study provided data on emotional reactivity to laboratory Stressors. Three samples were included: college students, hospital employees, and men with a family history of cardiovascular disease. In each sample, emotions were assessed using the EAS at three phases: baseline, mental arithmetic (MA), and cold pressure (CP). Overall, the three samples showed similar emotional responses to the laboratory Stressors. There was a general trend for increases in negative emotion to both tasks, with more emotional responses to MA as
compared to CP. These data are discussed in terms of the usefulness of the EAS for measuring momentary changes in emotion in laboratory or clinical settings.

**Koslow, et. al., (2000)** conducted a study on effect of goal setting program on self confidence level, the purpose of this study was to determine whether the self-confidence of collegiate wrestlers was affected by the implementation of goal setting programme. 30 participants were selected for the study. A wrestling specific goal setting program was designed and implemented. Wrestlers established weekly completion and season goals. Data was collected for 12 weeks period during the wrestling season. Self-confidence was measured through the use of Trait sport-confidence inventory. Dependent T-tests with alpha level adjusted for inflated Type-I errors, were used to analyze the data. Results indicate significant difference in confidence from week to week and from pre to post season. However, there was no difference in self confidence level before and after competition. It was concluded that weekly and long term seasonal goals might lead to increases in self-confidence in wrestlers.

**Hardy, (2001)** conducted a study on types of imagery associated with sport confidence in netball players of varying skill levels, for the purpose of the study Female netball players (low-standard N = 55; high-standard N = 68) were selected as the subjects. Sport Imagery Questionnaire was administered. One week later in a competition setting, Ss completed the State Sport Confidence Inventory. In the low-standard group, mastery imagery and imagery related to game strategies [Ss believed they knew what to do and would do it well] accounted for a significant proportion of variance in sport confidence. Specifically, Ss with high confidence used more imagery about dealing with challenging situations and strategies of the game than did those with low confidence. Imagery related to the emotions of playing was negatively related to confidence. In the high-standard group, goal-achievement imagery was the only significant predictor of variance in confidence measures.

**Jones, et. al., (2002)** conducted a study on the impact of motivational imagery on the emotional state and self-efficacy levels of novice climbers, 33 Novice female climbers were selected as samples for the study. Samples participated in four sessions of rock climbing techniques. The control group performed additional light exercise, while an experimental group participated in an additional scripted imagery training program.
Imagery comprised both motivational general-mastery and motivational general-arousal content. Pre- and post-training self-efficacy and perceived stress measures were obtained. Climbing performances were similar for both groups. The imagery group reported significantly lower levels of stress and higher levels of self-efficacy for performing correct techniques.

George (1994) conducted a study to find out the relationship between self-confidence and performance, yet, this relationship is still not fully understood. Though many theories of self-confidence have been proposed, self-efficacy theory currently provides the strongest framework from which to investigate self-confidence in sport. This study employed path analytic techniques in an effort to examine the casual relationships in Bandura’s model of self-efficacy in a field setting. Male intercollegiate and high school baseball players (N=53) completed self-report measures over a nine-game period during their respective seasons. Perceptions of self-efficacy, competitive state anxiety effort expenditure and performance were assessed, as well as an objective measure of performance. It was hypothesized that previous performance and anxiety would significantly mediate the effects of previous performance and anxiety on effort and hitting performance moderate support for Bandura’s model was found in that higher contact percentage were predictive of stronger percept’s of efficacy in five games and lower level of somatic and cognitive anxiety were associated with stronger self-efficacy beliefs in seven games. In turn, self-efficacy was a predictor of effort and hitting performance in six of the nine games. In all cases, higher precepts of efficacy were associated with increased effort expenditure and greater hitting performances. Results are discussed in relation to the ecological validity of previous casual examinations of self-efficacy theory, as well as the utility of self-efficacy theory as a framework for investigating for the self-confidence-performance relationship.

Henry (1990) designed a study to investigate the effects of a psychological skills training (PST) program over a two-month competitive football season on cognitive anxiety, somatic anxiety, self-confidence, mood states, trait anxiety and attentional style of high school football players, Subjects consisted of 59 members of the 1988. Concordia academy and Edison high school football teams, Concordia academy served as the experimental group (N=31) and Edison high school was the control
The competitive state anxiety inventory-2 (CSAI-2) was used to assess cognitive anxiety, somatic anxiety and self-confidence. The CSAI-2 was administered to the subject prior to the 1\textsuperscript{st}, 4\textsuperscript{th}, 5\textsuperscript{th} and final game of the regular season. The profile of mood states (POMS) was used to measure mood states pre and post season as well as before the 1\textsuperscript{st}, 4\textsuperscript{th}, 5\textsuperscript{th} and last game of the regular season. Marten’s (1997) sport competition anxiety test (SCAT) provided pre and post season measures of trait anxiety. While the test of attentional and interpersonal style (TAIS) was measured to determine pre and post-season attentional style. A repeated-measures design was used to determine the initial equivalence of the teams and to check for game effect and interaction. The specific psychological characteristics dealt with in this manner included cognitive anxiety characteristics dealt with in this manner included cognitive anxiety and self-confidence as measured by the CSAI-2, and mood states, as measured by the POMS. A simple repeated-measures design was used to determine if changes across administration was statistically significant for both teams. Paired T-tests were run using the first and last game means for both teams to determine if the means had made a significant change over the course of the season. The effect of a PST program on trait anxiety as measured by the SCAT was analyzed statistically using a pre-post test format. Paired T-test was employed to analyze the change of the pre-season and post-season means. The relationship between trait anxiety (SCAT) and cognitive somatic anxiety (CSAI-2) was investigated. In order to determine the extent of the linear relationship between the mean of the pre-season SCAT score and the mean of the four CSAI-2 game scores on cognitive and somatic anxiety, a simple person product-moment correlation was calculated. The impact of a PST program on attention style as measured by the TAIS was investigated. Paired t-tests were used to analyze the change in pre-and-post-season means.

Salmon (1994) assessed the use of imagery by soccer players the purpose of this study was to investigate the motivational and cognitive use of imagery by soccer players of various skill levels. The instrument developed and employed in this study was the Imagery Use Questionnaire for Soccer Players (IUQ-SP). It was based on the original IUQ developed by Hall, Rodgers and Barr (1990) and, in part, on Paivio’s (1985) framework of how imagery functions in motor skills. The items examined when players use imagery and whether or not it is used to assist with game strategies, individual skills, motivation levels and goal-oriented responses. The questionnaire
was completed by 362 players at the national, provincial and local levels. The results from the questionnaire indicated that soccer players tended to use imagery more in conjunction with competition than training. Players also reported using imagery more for its motivation function than its cognitive function. In general, the elite athletes reported employing more imagery than non-elite athletes regardless of the function imagery served.

Mamassis (2004) conducted study on the effects of a Mental Training Program on Juniors Pre-Competitive Anxiety, Self-Confidence, and Tennis Performance. This investigation reports the impact of a season-long Mental Training Program (MTP) on two elite junior tennis players. The two reported cases were part of a study in which MTP players \((n = 5)\) in addition to their tennis practice were exposed to 5 different psychological skills: goal setting, positive thinking and self-talk, concentration and routines, arousal regulation techniques, and imagery. Another group of elite junior tennis players \((n = 4)\) followed the same amount and quality of tennis practice but received no mental training practice. Program effectiveness was evaluated through (a) the Competitive State Anxiety Inventory-2 (CSAI-2), (b) the athletes' appraisal on 8 aspects of tennis performance, and (c) tennis-specific statistical data of two selected cases. The results indicated an increase in the direction dimension of the somatic anxiety, cognitive anxiety and self-confidence for the intervention group at the post-test. Moreover, the intensity of self-confidence, as well as the overall tennis performance, was greater for all the participants of the intervention group after the MTP. Results on two selected cases are reported which clearly demonstrate the effectiveness of the MTP in eliminating specific performance problems. Psychological factors of potential relevance to athletic flow experiences. A secondary purpose was to empirically examine the relationship between flow and optimal performance. Understanding factors that may be associated with flow will help to make this optimal mental state more accessible to researchers and practitioners. Self-concept and use of psychological skills were predicted to be related to self-reported flow states. Competitive athletes across three sports completed dispositional assessments of athletic self-concept, psychological skills, and flow. The athletes also completed a post-event flow assessment, as well as other questions relating to their performance, after a specified competitive event. Positive relationships were found between flow and aspects of self-concept, and the relationships between flow and
psychological skills use were also in the expected directions. In addition, the predicted positive relationship between a post-event flow assessment and performance criteria was obtained. This study builds on earlier research that has investigated antecedents of flow, and contributes to the expanding knowledge base of psychological factors related to optimal experience and performance.

Rodgers (1991) conducted a study on the effect of an imagery training program on imagery ability, imagery use, and figure skating performance for the purpose of the study 30 samples were selected. In addition, the influence of imagery training on skating performance was compared to verbalization training. The study employed two groups of figure skaters, an imagery training group, and a verbalization training group. All skaters were assessed for movement imagery ability, their use of imagery, and their skating performance prior to and following a 16-week training period. During this training period the imagery and verbal groups received instruction and guidance in the use of their respective types of mental practice. The imagery group improved in visual movement imagery ability and showed several changes in imagery use. Specifically, they were more likely to use imagery in practice, had more structured imagery practice sessions, and could more easily visualize and feel certain aspects of their skating performance compared to the verbalization group. In terms of performance, skaters in both the imagery and verbalization groups attempted and passed more skating tests than would normally be expected.

Berto (1999) investigated the differences in alpha activity during imagery emphasizing stimulus prepositions (3 p) and imagery emphasizing response prepositions (RP) as related to the skill level of the subjects, it was hypothesized that individuals in the expert group would produce greater alpha power increase in the right parietal region and lower alpha power increase in the left posterior region during imagery emphasizing response propositions as opposed to individuals in the novice group. Twenty two right handed male subjects were assigned to either on expert (N=11) or a “novice” (N=11) group depending on past experience on a golf putting task. These findings advocate that novice subjects needed to process more information based on their attenuating of alpha power in comparison to the expert individuals. Thus, the attenuating of alpha power may be an indicator of the lack of familiarity with the task at hand. This suggests that novice individuals should physically learn the
task prior to imagery performance. Further, results revealed that individuals in the expert group produced greater lower alpha group.

**McKenzie (1997)** had investigated the effect of mental imagery training on the magnitude and strength of individuals and strength of individual’s self-efficacy for a dart throwing task. He employed multiple baseline across-subjects design in which six (N=6) subjects were administered a 15-session mental imagery training program following baseline sessions of varying lengths. Two subjects showed that their self-efficacy magnitude for task had increased as a result of the imagery training. All the subjects reported an improvement in their overall pattern of performance from baseline to intervention phases. Two 2X3 analysis of variance showed no significant differences between the control and experimental group on ratings of self-efficacy magnitude or strength.

**Rattanakoses, et.al., (2009)** evaluated the relationship of Imagery and Self-Confidence in Female and Male Athletes, For the purpose of the study 120 samples by purposive sampling, 71 male and 49 female athletes who are from the Khon Kaen Sport School in Thailand and who regularly participate in sports training (5 days a week) were selected. The Sport Imagery Questionnaire and a Self-Confidence questionnaire were used to collect data. Analysis considered two parameters, imagery and self-confidence, which were evaluated with regards to the physical fitness level and experience of the athletes. The data was analyzed using a t-test to determine the difference of the means between imagery and self-confidence measures in males and females. Analysis of variance (ANOVA) (P<0.05) was used to evaluate differences across the groups, and linear regression and correlation analyses (r =0.71) were used to compare between genders, physical fitness, and experience levels. The results show that there are significant correlations between males and females in terms of imagery and self-confidence. This result suggests that imagery and self-confidence in male and female athletes are associated with high levels of physical fitness and more experience in sports situations.

**Prajapati, et. al., (2009)** conducted a study on effect of imagery practice on the serve accuracy in tennis, For the purpose of the study 26 students of the University, National level players of the state and players of certificate course, before the main training the tennis serve skill was tested by thanacom’s test. Serves were scored and
ranked highest to the lowest, then divided into two groups by random sampling method. The experimental group practice the skill of serve along with the mental imagery practice and the control group practice only serve. The practice lasted for six weeks, five days a week. The mean of accuracy score, standard deviation of the two group were analyzed by paired t test (t=1.508) at the level0.05 significance. The study revealed that six week imagery practice on experimental group did not result in significant improvement in the skill of serve in tennis. But they show the improvement in scores obtained before imagery practice. The raw data of experimental group can prove that serve practice accompanied with mental practice can improve the accuracy of serve skill in tennis.

Tojari et. al., (2009) investigated the role of somatic and cognitive anxiety on performance of master women in karate. 22 karate master women in national Iranian team were selected randomly. All the subjects had 2-3 years of experience in the national Iranian team. Participants were given a questionnaire on 2 (CSAI-2) to fill. In these times blood pressure and heart rate were registered by Satrap instrument for investigation of somatic anxiety. The first six questionnaires given to subjects so they can reply to questions that a scaled up to 5 and a number indicates the number 5 represents the lowest and most feeling. 10 to 45 minutes before the competition after round and exactly twice as active repeat. For appraisal of performance two master coaches in karate were selected and they registered performance of subjects with attention to questionnaire. Data was analyzed by using SPSS version 12 and regression test line. The findings revealed that the relationship between the systolic blood pressure and performance was r=0.01 p>0.05, the relationship between cognitive heart beat and performance was found to be r=0.02 p>0.05 and the relationship between cognitive agitation and performance was found to be r=0.23 and p>0.05 which shows the lack of relationship between cognitive and physical agitation.

Hassan (2009) investigated the effect of imagery in soccer players’ perceptions of anxiety during penalty kick, this study was an experimental study and the researcher by simple sample random method selected 40 men soccer players out of 200 players. They were between 18 to 35 years of age and measured their level of anxiety with SCAI 2 question mentioned. The players followed imagery programme for 10 week and 4 days every week and researcher compared the score of pretest and posttest with
the ‘t’ test. With mention result of this study imagery practice had positive effect on reduction of anxiety, imagery practice with kick training had more effect on reduction of anxiety than just kick practice during penalty kick.

Woodman, et. al., (2003) investigated two relationships in competitive sports: 1 state cognitive anxiety with performance and 2 state self-confidence with performance. For the purpose of the study 48 players were selected as samples. The cognitive anxiety mean effect size was $r=0.10$ ($P<0.05$). The self-confidence mean effect size was $r=0.24$ ($P<0.001$). A paired samples t-test revealed that the magnitude of the self-confidence mean effect size was significantly greater than that of the cognitive anxiety mean effect size. The moderator variables for the cognitive anxiety-performance relationship were sex and standard of competition. The mean effect size for men ($r=0.22$) was significantly greater than the mean effect size for women ($r=0.03$). The mean effect size for high standard competition ($r=0.27$) was significantly greater than that for comparatively low-standard competition ($r=0.06$). The significant moderator variables for the self-confidence performance relationship were sex, standard of competition and measurement. The mean effect size for men ($r=0.29$) was significantly greater than that for women ($r=0.04$) and the mean effect size for high standard competition ($r=0.33$) was significantly greater than that for low-standard competition ($r=0.16$). The mean effect size derived from studies employing the Competitive Anxiety Inventory-2 ($r=0.19$) was significantly smaller than the mean effect size derived from studies using other measures of self-confidence ($r=0.38$).

Rokka (2008) evaluated the levels of intensity and direction of the competitive state anxiety in junior handball players prior to a competition and to investigate any possible differences between male and female players, as well as in relation to their athletic experience, a sample of the study consisted of 115 handball players, members of eight handball teams (four male and four female), which participated in the Greek Junior Handball Championships finals held in Athens in 2008. For the data collection, the model used was the Competitive State Anxiety Inventory-II (CSAI-II, Martens, Burton, Vealey, Bump & Smith, 1983; Martens et al., 1990; Jones & Swain, 1992), which was modified for the Greek population by Stavrou, Zervas, Kakkos & Phychoudaki (1998). All players filled in the questionnaire 30 minutes before the competition. The results showed that male junior handball players reported lower
scores of cognitive anxiety, which was facilitative to performance. On the other hand, females displayed a higher score in cognitive anxiety, which was rather debilitating to performance. Furthermore, junior male handball players displayed higher self-confidence, with positive effects on their performance, while female handball players stated lower self-confidence, which was neither facilitative nor debilitating to performance. In relation to years of experience, the results revealed that players with four to six years of experience showed higher self-confidence with facilitating direction, while players with less years of experience displayed lower self-confidence, with neither facilitative nor debilitating effects on their performance. In conclusion, the psychological preparation of junior handball players must be taken into serious consideration, during the coaching procedure. Nonetheless, further investigation is needed for the generalization of the results in Greek handball.

Krishnan (2008) conducted study on Effect of Mental Imagery Training Programme on Selected Psychological Variables and Skill Performances of Volleyball Players. Initially twenty elite and twenty novice volleyball players were selected as subjects for the experimental group. After administering MIQ-R (Hall), according to the imagery ability fifteen elite and fifteen novice players were selected as samples for the actual twelve weeks experimental (imagery) training programme. Another fifteen elite and fifteen novice volleyball players were also selected for the control group. For the purpose of the study Cognitive Anxiety, Somatic Anxiety, Self-confidence, Attention were selected as Psychological Variables and serve Pass (service reception), attack, block were selected as skill performance Variables. The imagery training for the four skills was given according to Latin square repeated measures design. For the purpose, four subjects each were grouped for each of the four skills, namely serve, pass (service reception), attack and block. The imagery training by using the imagery script was given repeatedly five to six times within fifteen minutes and then they were asked to open their eyes and relax. The pre and post tests on the selected psychological variables and skill performances were taken before and after the total duration of twelve weeks mental imagery training program. For the analysis of data ‘t’ test was employed. Mental imagery interventions were found to be effective in reducing the cognitive anxiety and somatic anxiety of volleyball players. Imagery interventions significantly improved the self-confidence and attention of volleyball players. It was
found that the imagery intervention was effective in improving the performance in serve, pass, attack, and block of volleyball players in actual playing situation.

**Yusuf (2003)** assessed the impact of a psychological skills training (PST) program on the athletic performance of sprinters at Technikon Pretoria, South Africa, the structure of the PST program was based on the structure outlined by Wann (1997), and Winter and Martin (1993) Sport Psychology Basic Training Program constitutes the content of the program. The program consisted of five stages: education, pretests of psychological skills, the PST program per se, an implementation phase, and posttests. The specific psychological skills that the program attempted to enhance were self-confidence, stress management, attention, intrinsic motivation and mental imagery. Athletic performance was measured by the sprinters personal best times on the one hundred meter event at the beginning and end of the PST program. Firstly, the data was analyzed to determine if there was an improvement in psychological skills and athletic performance. Thereafter the difference in athletic performance between the beginning and end of the program was correlated with the difference between the pretest and posttest scores of the psychological skills measured. The research findings indicated that there was a significant improvement in the reduction of stress levels, mental imagery skills, and a greater number of athletes had an internal focus of attention. No significant differences were found in self-confidence, intrinsic motivation and the number of athletes with a narrow focus of attention. The only significant correlation was between intrinsic motivation and athletic performance.

**Donovan (2004)** conducted a study on the topic of “The Role of Attention in Goal Setting Theory”, This study examined the role of attention in goal setting theory, using techniques adapted from selective attention research. Specifically, it explored activation and suppression of goal related information in the presence of two conflicting assigned goals. Pre vs. post goal completion and goal commitment were examined as moderators of these attention effects. In addition, exploratory analyses looked at the impact of individual differences on attention (goal preference & action-state orientation). Analyses were conducted using three-level hierarchical linear modeling (HLM), where repeated measures occur within trials, which are nested within individuals. In general, results failed to support the hypotheses. However, weak support was found for attention effects when commitment was also taken into
consideration. Further, while commitment was not found to have the strong moderating influence on attention that was hypothesized, there is some evidence for its overall importance to the attention mechanism of the goal/performance relationship.

**Biddle (2011)** investigated a study on the topic of “Motivation and Perceptions of Control: Tracing Its Development and Plotting Its Future in Exercise and Sport Psychology”. An analysis of control-related motivation constructs that have been studied in sport and exercise psychology is attempted using Skinner's (1995, 1996) agent-means-ends framework and her “competence system” model. I review and analyze six constructs or approaches that have received a great deal of attention in our field in the past (locus of control and attributions), the present (self-efficacy, achievement goal orientations, and perceived behavioral control), and, I predict, the future (self-determination theory). For each construct or approach, I provide an overview and research summary followed by an analysis of its control-related properties using Skinner's frameworks.

**Trogdon (1996)** conducted a study on mental imagery and the development of pitching accuracy, the purpose of the study was to determine the effect of mental imagery practice upon the improvement of pitching skills. The sample used in this study consist of 46 male volunteers students who were registered at South-West Baptist University. The subjects were divided in to three groups by using a table of random numbers. The three methods of practice were as follows: group A, Physical practice, group B, Mental Imagery practice and group C, Physical practice and Mental Imagery practice. A pre-test was given to the subjects prior to the experiment. For the next four weeks subjects participated in their prescribed practice routine. The subjects threw sixty throws in each practice session and total 480 throws. The necessary devices were a four by six foot canvas with an area simulating a strike zone on a better. A Post-test followed the four week training period. The main gain scores for each set and each group were calculated and subjected to the dependent t-test to see if significant changes had occurred at 0.05 level. Also, an analysis of variance was computed to determine if any changes had occurred from post-test between the groups at the 0.05 level. The result of the study indicated that all three practice groups made significant improvement between the pre-test and post-test scores at the 0.05 level.
However, the analysis of variance yield data that found on group significantly superior to the other groups. In conclusions, the result of this study support earlier research which indicates the use of mental imagery will improve the performance of physical skills. Subjects who followed their accuracy scores as well as those combined Physical and Mental practice. While some of the practice modes proved to be superior to the others, a positive statement could be made for the use of mental imagery in that the physical practice group showed no superiority.

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 Spielberg 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 was higher in trait anxiety.

Finch (1993) studied the relationship among coping strategies, trait anxiety and performance in collegiate softball players. One hundred and forty-eight collegiate softball players from 13 teams competing across the South Eastern U.S. participated in this investigation. The result suggested that a profile of more effective coping includes low trait anxiety, high use of adaptive coping strategies, and low use of maladaptation coping strategies, higher self rating of coping ability and more automated coping skills.

Spiker (1983) studied about an assessment and treatment of competitive state anxiety among collegiate baseball players, the purpose of this study were to determine the psychometric properties of sports competition anxiety test (SCAT), cognitive somatic anxiety questionnaire (CSAQ), competitive state anxiety (CSAI) and the present affect reactions questionnaire III (PARQ III): to determine which varsity baseball players demonstrated a need for anxiety treatment, to determine the effectiveness of cognitive restructuring in reducing the subjects level of pre competitive state anxiety, to determine the effectiveness of cognitive restructuring in combination with progressive relaxation. It was determine that a one standard deviation reduction in the subjects’ pre competitive treatment mean scores relative to base mean score and downward graphical trend would indicate treatment effectiveness.
Sofian, et al., (2009) investigated the effectiveness of imagery and coping strategies in sport performance. Participants were 106 person, both male (n=42) and female (n=64) aged between 17 and 45 years old who represented the different level of participants of sport. Which is State players (n=46), National players (n=38) and District/university players (n=22) in various sports competitions. Participants completed the SIQ questionnaires to measure imagery skill while using ACSI-28 questionnaires to measure coping skill. Result showed Malay respondents is the higher interested in the study are 79 persons. Meanwhile, sports involved of respondents are others sport (archery, football, netball, rugby, hockey and athletics) which are 50%. The most level of age participated are 21 to 24 years old. Most probably, in this age level, some of them represented for national (n=38) and state (n=46). The result of this study showed that the SIQ and ACSI-28 is reliable to the respondents participated which is the Cronbach’s alpha coefficients, mean and standard deviation of all the variables are presented were .932. For the ACSI-28, the participants most frequently used coping skills is the confidence (M=2.0802, SD=.5644) and the least frequently used is coach ability (M=1.5519, SD=.4361). From the resulted, there were significant differences in one subscales of ACSI-28 coping with adversity between male and female, which are concentrated with t (106) = 2.118, p = .037. One Way ANOVA analysis subscales with level of participants result showed that all subscales imagery (SIQ) were significant differences with levels of participation. In addition five subscales ACSI-28 also were significant differences with level of participations in this study. It might be because of the participated from a national and state player (n=38, n=46). In addition, result showed only subscales coping with diversity are significant differences where p=.037 (M=2.0448, SD=.5115) compare the rest of subscales ACSI-28.

Feltz (1987) conducted a study on generality and specificity of attention related to competitive anxiety and sports performance, and used R.F. Nideffer’s test of attentional and interpersonal style (TAIS) was developed as an objective measure by which an individual’s attentional predisposition could be identified and used to predict performance on a variety of tasks. The present study constructed a baseball/softball batting (B-TAIS) version of each TAIS attentional subscale. Both tests were administered to 29 intercollegiate baseball and softball players. The B-TAIS demonstrated higher test-retest reliability on 5 of the 6 attentional subscales and was
higher than the TAIS in internal consistency on all negatively related to all subscales assessing effective attentional deployment and negatively related to all subscales assessing ineffective attention. Significant positive correlations also existed between B-TAIS ineffective subscale scores and competitive trait anxiety. These relationships were not found with the TAIS.

**Howard (1993)** conducted a study with Friedman and the purpose of this investigation was twofold: a) to determine the influence of individuals and team goals on cohesion and performance in youth bowling; and b) to investigate the cohesion performance relationship. Specially, it was hypothesized that; a) individual and group goals would enhance bowling performance more than do your best goals; b) team goals would lead to higher levels of task and social cohesion than either individual goals or do your best goals and c) cohesion and performance were positively related. Participants were 31 children, ages 10-14 (99 males and 32 females) on 39 teams (18 boys’ teams, 8 girl’s teams and 13 co-ed teams.). Each team consisted of 3 to 4 members each from 5 different leagues in two bowling centre’s in Greensboro, NC. All 5 leagues lasted 30 weeks each. At the start of the second season, each team was randomly assigned to one of 3 bowling conditions: a) individual goal; b) team goal and c) do your best goal. They bowled for 10 consecutive weeks with performance being assessed by team bowling average and team with totals during the 5th and 10th weeks of the season. Cohesion was assessed by the group environment questionnaire during the first, 5th and 10th weeks. Results indicated that individuals and team goal conditions was significantly more games than the do-your-best- goal condition over the 10 weeks period and that bowling averages improved from week 5th to week10. Results also revealed no differences in either task or social cohesion among goal conditions and cohesions and performance were not related. These findings are discussed in terms of Locke’s (1968, 1981) mechanistic theory of goal setting as well as the environmental factors associated with youth league bowling.

**Mathes (1995)** conducted a study to examine whether, across a season of competition, Women’s intercollegiate coaching (gymnastics, swimming) and interacting (lacross, basketball) teams differed in cohesion. Seventy female athletes ranging in age from 18-22 years (gymnastics, n=18; swimming, n=22; lacross, n=16; basketball, n=13) participated in the study. The group environment questionnaire
(Widmeyer, Brawley and Carron, 1985), Which is composed of 4 subscales: attraction to the group-task (ATG-T), Attraction to the group social (ATG-S), group-integration-task (GI-T), group-integration-social (GI-S) was used to measure cohesion. Testing for cohesion occurred preseason (3 days prior to first regular competition), mid-season and post-season, A2X2 ANCOVA was utilized to compare coaching and interacting team cohesion scores on each subscale at mid-season and post-season. Preseason measures were utilized as covariates. A significant sport by time interaction (P< .05) was found on only the ATG-T subscale at mid-season with coaching teams displaying significantly greater changes in cohesion than interacting teams. These findings are discussed in terms of gender, type of activity, overall season performance and NCAA division status.

Ann (1987) conducted a study to find out that the structure of sport team cohesion has become an increasingly important field of investigation for those interested in the performance, satisfaction and stability of sport teams, recent theoretical developments by Carron (1982) indicate that sport team cohesion may be multidimensional in nature. Carron has identified four dimensions of antecedents in his conceptual system as important factors influencing the development of sport team cohesion. These dimensions include environmental, personal, leadership and team antecedent. According to Carron, these antecedents impact the type and level of cohesion experienced by team members. Further, Carron has identified four specific types of sport team cohesion that are present in varying degrees for each individual and has operationalised their measurement in his group environment questionnaire GEQ). The present investigation was concerned with identification of the significant perceived multidimensional antecedent variables to sport team cohesion. Two-hundred fifty-five USVBA and city recreational volleyball players were asked to complete five questionnaires which measured 24 different antecedent variables and 4 dimensions of sport team cohesion. Perceptions of individual’s orientation, satisfaction, desired coach’s behaviour. Team interpersonal relations, desire for group success and expectations of success were measured along with a number of demographic variables. Results indicated that 11 of the possible 24 antecedent variables significantly predicted the 4 types of sport team cohesion in Carron’s GEQ measure. Four separate stepwise multiple regression analyses indicated that a combination of 3 or 6 antecedents accounted for anyone type of cohesion. Specifically, the perceived
general functioning of the team, member satisfaction and the desired training behaviour of coaches were major overall predictors in 3 of the 4-regression analyses. Additionally, support was found for Carron’s contention that sport team cohesion could be separated into social cohesion and task cohesion. The desired social support behaviour of coaches, affiliation orientation and the level of team organization significantly predicted social cohesion but not task cohesion. Finally ANOVA results indicated sex differences in perceptions of sport team cohesion for USVBA team members but not for city recreational players, suggestions for future research on sport team cohesion were indicated.

**Widmeyer (1987)** studied that Cohesion is supported to be positive in interacting teams but negative in co-acting teams, in interacting sports, success depends upon appropriately combining each player’s diverse skills in an interdependent pattern of teamwork. In co-acting sports players independently perform the same skills and team success is determined by the sum of individual performances. Female NCAA (N=83) was tested using the group environment questionnaire at a 54-hole tournament cohesion significantly predicted performance outcome, communication and motivation as assessed by commitment to the team goal. Communication and motivation accounted for only 50% of performance variance with motivation being the only significant predictor. These 3 relationships are minor. These variables are minor factors in any association between psychology and performance in golfers. It is not known whether cohesiveness leads to successful performance or if success makes a team more cohesive. Despite a leak of association with performance, cohesiveness might facilitate better training climate and group organization/function, which in a tangential way could promote a better platform for more important variables and psychological factors.

**Paul (1996)** conducted a study to examine the effect of viewing a highlight video on performance and confidence. More specially, this study: 1) assessed the confidence levels through the use of the CSAI-2 self-confidence subscale and 2) evaluated actual performance by comparing changes in the total performance rating of elite athletes in competitive changes. Under the guidelines of a single subject multiple baseline designs; different players were given highlight music videos of their own best performance at different points during the season. These videos were designed to
build a subject confidence and were watched by the players on each practice and game day. No significant difference was generated on the confidence measure and performance measure failed to demonstrate a treatment effect. However, the evidence of positive confidence and performance changes indicate the possibility of an influence an individual female college basketball players. Important performance changes took place for the top players on the team who used the treatment over the longest period of time. Furthermore, one of the players appeared to benefit from use of the tape while returning from an injury.

Vasilis, (2007) studied on the Early Steps PE curriculum evaluation. Preliminary validation results for the Social Behavior Instrument and presented in 12th European congress of sports psychology. The preliminary validation of the instrument used to evaluate preschool children’s socio emotional behavior was the aim of the current study. The Social Behavior Instrument (SBI) was developed in order to be used in the “Early Steps” project. First, face and content validity of the items was evaluated, and this procedure resulted to a pool of items. Second, the pool of the items selected was factor analyzed by administrating the instrument to the teachers and parents of 511 preschool children of four European countries. The countries were Greece, Cyprus, Italy, and Finland. Exploratory factor analysis revealed that the SBI consisted of one factor containing 18 items, and provided adequate psychometric support for the instrument. Exploratory factor analysis should be preferred at first when an instrument includes items that had not been tested before and thereby, had not yet reached its final form. Regardless of the encouraging results, the SBI should be assessed further, combined with advanced statistical methods in order to be ensured the validation of the instrument.

Ian, (2007) worked on Development and validation of the Moral Disengagement in Sport Scale. A sport-specific measure of moral disengagement was developed in two studies. The scale was designed to measure the moral disengagement mechanisms described by Bandura (1991): moral justification, euphemistic labeling, and advantageous comparison, diffusion of responsibility, displacement of responsibility, distortion of consequences, dehumanization, and attribution of blame. In Study 1, a 59-item version of the scale was developed and tested with 308 athletes from the sports of football, hockey, rugby league, rugby union, netball, and basketball. A series
of Confirmatory Factor Analyses (CFA) testing different models suggested that the model that best fitted the data had six first-order factors that could be represented by one second-order factor. Study 2 involved 305 athletes from the same six sports completing a 40-item version of the scale alongside measures of the theoretically related constructs of prosocial behaviour, antisocial behaviour, and societal moral disengagement. CFA confirmed the 6-factor, second-order structure. Results from Study 2 supported the construct validity of the final 32-item version of the scale, providing evidence for its factorial, concurrent, convergent, and discriminant validity. These results included significant correlations between overall sporting moral disengagement and prosocial behaviour ($r = -.34$), antisocial behaviour ($r = .60$), and societal moral disengagement ($r = .71$). The Moral Disengagement in Sport Scale (MDSS) is proposed as a valid and reliable measure of moral disengagement for use in the sporting context.

James, (2007) worked on Development and preliminary validation of the Positive and Negative Self-Talk Scale (PANSTS). Although a major emphasis in the self-talk (ST) literature has been on positive and negative ST, a psychometrically sound and generalizable measure of athletes’ use of positive and negative ST is currently lacking. The lack of such instrumentation has likely contributed to the underdeveloped nature of ST research. Thus, the purpose of this investigation was to develop a measure of positive and negative ST. To this end, 201 athletes completed a 33-item questionnaire (PANSTS) assessing the usage of positive and negative ST. Confirmatory factor analyses offered support for a correlated two-factor structure (overall fit indices; $SB \chi^2 = 269.55$, $df= 229$, RMSEA = .030, $CFI = .96$, $SRMR = .066$) with a 23-item questionnaire with good internal consistency (positive ST $\alpha = .84$ and negative ST $\alpha = .86$). Support for the PANSTS’ criterion validity was evident; both positive ($r = .25$, $p < .001$; $r = .36$, $p < .001$) and negative ($r = -.19$, $p < .01$; $r = -.34$, $p < .001$) ST were positively correlated with the valance and interpretation dimensions of the Self-talk Grid, respectively. Supportive evidence for the PANSTS’ concurrent validity was also generated via an appropriate pattern of significant correlations between positive ($r = .29$, $p < .001$) and negative ($r = -.17$, $p < .05$) ST and optimism as well as with subscales from a trait version of the CSAI-2: cognitive anxiety (negative ST; $r = .37$, $p < .001$); somatic anxiety (positive ST; $r = .22$, $p < .01$, negative ST; $r = .46$, $p < .001$); and self-confidence (positive ST; $r = .33$, $p < .001$, $r = .36$, $p < .001$).
negative ST; $r = -.30, \ p < .001$). Given these findings, we recommend the PANSTS for examining positive and negative self-talk.

Nikolaos, (2007) studied evidence on the validity of the Automatic Self-Talk Questionnaire for Sport – ASTQS. The purpose of the present investigation was to assess the psychometric integrity of the Automatic Self-Talk Questionnaire for Sport (ASTQS). The ASTQS was developed to identify the nature and the structure of athletes’ self-talk during training and competition. The development of the instrument was based on raw data themes from open-ended questionnaires completed by athletes. The structure underlying the nature of athletes’ self-talk was assessed through content analysis and a series of exploratory factor analyses. This preliminary evidence revealed three broad dimensions of self-talk; positive, negative and neutral/irrelevant. Factor analysis identified four positive (confidence, psych-up, attention, and anxiety control), three negative (worry, somatic fatigue, and disengagement) and one neutral/irrelevant factor. In the present investigation, confirmatory factor analyses were performed to test the factor structure of the ASTQS. First, separate models were tested for positive and negative self-talk dimensions. The results supported the hypothesized factor structure for both dimensions (CFI: .93, RMSEA: .05 for positive; CFI: .96, RMSEA: .04, for negative). Subsequently a model comprising all the identified factors was tested. The results showed acceptable fit for the 8-factor model (CFI: .91, RMSEA: .04). Finally, a second-order factor model was tested, where the individual positive and negative self-talk factors were hypothesized to load on two higher positive and negative self-talk factors respectively. The analyses for the second-order factor analysis showed marginal fit (CFI: .89, RMSEA: .04). Further examination to establish the validity of the instrument is warranted; nonetheless the results of the present investigation provide support regarding the psychometric integrity of the ASTQS.