REVIEW OF RELATED LITERATURE
CHAPTER – II
REVIEW OF THE LITERATURE

The review of the related literature, act as guidelines for identifying the general trend in the research work already done in the concerned field or area. This also helps the investigators in formulating the problems and in providing directions to the research undertaken. The present investigation has made sincere attempt to conduct a comprehensive and thorough survey of the related literature with respect to variables under investigations. The reviews of the related literature was taken up extensively before and after the selection of the problem with a view to identify the extend of the problem. The review also helped the investigator to develop an understanding regarding the concept of the selected variables and also in developing ideas that contribute to the overall rational and interpretation of data. Brief reviews of the related studies relevant to the problem undertaken for research in the present investigation have been presented in this chapter.

Emotional intelligence

Killgore, et.al (2007) proved that insufficient sleep can adversely affect a variety of cognitive abilities, ranging from simple alertness to higher-order executive functions. Although the effects of sleep loss on mood and cognition are well documented, there have been no controlled studies examining its effects on perceived emotional intelligence (EQ) and constructive thinking, abilities that require the integration of affect and cognition and are central to adaptive functioning. Twenty-six healthy volunteers completed the Bar-On Emotional Quotient Inventory (EQi) and the Constructive Thinking Inventory (CTI) at rested baseline and again after 55.5 and 58 h of continuous wakefulness, respectively. Relative to baseline, sleep deprivation was associated with lower scores on Total EQ (decreased global emotional intelligence), Intrapersonal functioning (reduced self-regard, assertiveness, sense of independence, and self-actualization), Interpersonal functioning (reduced empathy toward others and quality of interpersonal relationships), Stress Management skills (reduced impulse control and difficulty with delay of gratification), and Behavioral Coping (reduced positive thinking and action orientation). Esoteric Thinking (greater
reliance on formal superstitions and magical thinking processes) was increase. These findings are consistent with the neurobehavioral model suggesting that sleep loss produces temporary changes in cerebral metabolism, cognition, emotion, and behavior consistent with mild prefrontal lobe dysfunction.

Landa, et.al (2007) investigated that Nurses suffer from stress and health problems owing to the characteristics of their work and their contact with patients and death. Since emotions can have an effect on work outcomes, emotional intelligence (EI) may explain the individual differences in dealing with work stress. This study investigated the interrelationships among EI, work stress and health. We also examined the impact of socio-demographic variables (e.g. age, gender, length of service,) on stress and nurses' health. A questionnaire survey (anonymous) has been carried out to detect these interrelationships. A general public hospital in Spain. One hundred and eighty nurses participated. Data was gathered on demographic information and work, stress, health and EI. Beyond descriptive statistics, analyses of variance, mean differences and regression analyses were computed. Findings show a differential effect of the EI components in stress and health. As far as stress is concerned, the results show that the nurses who score high in clarity and emotional repair report less stress, whereas those with high scores in attention to emotions experience greater levels of stress. Furthermore, we find a positive relationship between age, length of service and stress, with younger nurses and those with a shorter length of service experiencing less stress. However, EI and health are not related to age or to length of service. Also, we find that married nurses report better general health. EI is shown for nurses as a protective factor against stress and a facilitative factor for health (especially the Clarity and Repair dimensions). These comments could be especially important in training future professionals in these abilities.

Meyer and Fletcher (2007) Over the past five years, sport psychology researchers and practitioners have become increasingly vocal in their suggestions that emotional intelligence (EI) may be an important construct in the sport domain. Initial research in sport has been valuable for gaining preliminary insights, but use of disparate theoretical frameworks and assessment techniques confuses rather than clarifies potential links between EI and sport. Specifically, the use of different definitions, conceptualizations, and assessment inventories may yield different EI profiles of the
same individual or team. This disparity has important implications for applied sport psychology, where there is a call for the use of theoretical paradigms, objective and subjective assessments, and empirical research to inform practice. The purposes of this paper, therefore, are to: (a) review EI models and assessment inventories; (b) review research on EI in business, health, and sport; and (c) identify directions for future research and professional practice in sport psychology.

Wong, et al. (2007) examined that Emotional intelligence (EI) has been an emerging topic for psychological, educational, and management researchers and consultants in recent years. However, existing literature has concentrated on demonstrating the effects of EI on either the mental health or on job outcomes such as job attitudes and performance. There is relatively little discussion concerning how EI, as a set of interrelated abilities about handling emotions, is developed. Understanding how EI is developed may be the significant first step for organizations to develop effective EI training programs. As an exploratory effort, we borrowed the basic argument from theories in human development to argue that life experiences affect EI development. Based on samples of university students from Singapore and Hong Kong, whether one of the parents was a full-time parent was a significant predictor of the students' EI. This finding was cross-validated with a sample of graduate students in Taiwan. Furthermore, age as a proxy for life experiences for this graduate student sample was found to be a significant predictor of EI. Implications for EI research and training are discussed.

Shi and Wang (2007) revised Wong and Law's (2002) Emotional Intelligence Scale (WLEIS), and specifically examined the feasibility of its use with Chinese university students. The participants were 1458 university students in two cities in China (Beijing and Shandong province) and results showed that the Chinese version of the WLEIS retained a four-factor structure. The scale had acceptable reliability, concurrent validity, convergent and discriminant validity. The psychometric features of the Chinese scale supported its feasibility as a research instrument to measure EI appropriately in Chinese university students. The results also showed that Chinese male students had higher EI scores than female students, reflecting a deviation from previous research.
Brown and Schutte (2006) conducted a study with the aim of this study was to examine the direct and indirect relationships between emotional intelligence and subjective fatigue. One hundred sixty seven university students completed questionnaires assessing subjective fatigue, emotional intelligence, and a range of other psychosocial factors. A series of regression analyses were used to examine the direct and indirect relationships between subjective fatigue and psychosocial factors. Higher emotional intelligence was associated with less fatigue. The psychosocial variables depression, anxiety, optimism, internal health locus of control, amount of social support, and satisfaction with social support each partially mediated between emotional intelligence and fatigue. Additionally, sleep quality partially mediated between emotional intelligence and fatigue. These findings regarding the association between subjective fatigue, emotional intelligence, and other psychosocial factors may facilitate an understanding of the etiology of fatigue and contribute to future research examining interventions aimed at helping individuals cope with fatigue.

Chan (2006) studied the relationships among four components of emotional intelligence (emotional appraisal, positive regulation, empathic sensitivity, and positive utilization) and three components of teacher burnout (emotional exhaustion, depersonalization, and reduced personal accomplishment) were investigated in a sample of 167 Chinese secondary school teachers in Hong Kong. One hypothesized and five competing models were constructed and tested using structural equation modeling procedures. The hypothesized model provided an adequate and moderately good fit, suggesting that emotional exhaustion, influenced by emotional appraisal and positive regulation, was causally prior to depersonalization and personal accomplishment, but personal accomplishment could develop relatively independently from the burnout components through the influence of positive utilization of emotions. Implications of the findings on the articulation of components of emotional intelligence and burnout for preventive intervention efforts to combat burnout are discussed.

Perlini and Halverson (2006) presented a study was threefold: a) to evaluate the standing on emotional intelligence of National Hockey League players, relative to the general population, b) to evaluate the relationship of draft rank and emotional intelligence (EI) measures to hockey performance, and c) to evaluate the relative
predictive value of these measures to performance indices: total NHL points and NHL games played. During the 2003–04 hockey seasons, 79 players across 24 NHL teams completed the Bar-On EQ-i. The findings indicated that years-since-draft was the strongest predictor of performance and draft rank was the weakest predictor of performance. With respect to EI, both intrapersonal competency and general mood added significant variance to predictions of number of NHL points and games played. Implications for predicting performance in the NHL, amongst draft prospects, is discussed.

**Austin, Saklofske and Egan (2005)** Emotional intelligence (EI), personality, alexithymia, life satisfaction, social support and health related measures were assessed in Canadian (N=500) and Scottish (N=204) groups. EI was found to be negatively associated with alexithymia and alcohol consumption and positively associated with life satisfaction and social network size and quality. The relative strengths of EI and personality as regression predictors of health-related outcomes were investigated for a subgroup of Scots (N range 99--111). The results of these analyses show that EI is more strongly associated than personality with social network size, but social network quality, life satisfaction, alcohol consumption; number of doctor consultations and health status are more strongly related to personality. More work is required to investigate the possible existence of other variables which, as with social network size are predicted better by trait EI than by personality.

**Extremera and Berrocal (2005)** investigated the association between Perceived Emotional Intelligence (PEI), measured by the Trait Meta-Mood Scale (TMMS), and life satisfaction in Spanish undergraduate university students. Specially, the predictive and incremental validity of this self-report measure of emotional intelligence was examined. The authors investigated whether PEI would account for variance in satisfaction with life beyond the level attributable to mood states and personality traits. Correlation analysis showed significant associations between Clarity and Repair and higher life satisfaction. Hierarchical multiple regression analysis confirmed these findings and indicated that Clarity accounted further variance in life satisfaction not accounted for by mood states and personality traits. These findings extend previous studies and provide additional support for the incremental validity of the TMMS.
suggesting that Clarity contribute to life satisfaction independently from well-known mood states constructs and personality trait

Gerits, Derksen, Verbruggen and Katzko (2005) presented a paper on a two-year longitudinal study on the emotional intelligence profiles of 380 nurses caring for clients with highly frequent and extremely severe behavior problems. The aim was to identify emotional intelligence cluster types for those nurses reporting the fewest symptoms of burnout, the least absenteeism due to illness, and the least job turnover. A repeated measure ANOVA was undertaken using a 0.05 level of significance. The fewest symptoms of burnout were reported by female nurses with relatively high emotional intelligence profiles and relatively low social skills. Males with higher problem-solving and stress-tolerance skills also showed less burnout. No specific cluster types with a significant relation to absenteeism due to illness or job turnover could be identified.

Gohm, Corser and Dalsky (2005) investigated 158 freshmen examined the association between emotional intelligence (emotion-relevant abilities) and stress (feelings of inability to control life events), considering personality (self-perception of the meta-emotion traits of clarity, intensity, and attention) as a moderating variable. Results suggest that emotional intelligence is potentially helpful in reducing stress for some individuals, but unnecessary or irrelevant for others. We highlight results among the highly stressed intense but confused participants in particular because they have average emotional intelligence, but do not appear to use it, presumably because they lack confidence in their emotional ability.

Kim (2005) examined the relations between adult attachment orientations and both emotional intelligence and cognitive fragmentation. Authentic self, which refers to a genuine sense of the self, was proposed as a mediator of such relations. One hundred and fifteen undergraduate students participated in the study. Applying Structural Equation Modeling, the results showed that degree of authentic self mediated the relations between attachment dimensions and either emotional intelligence or cognitive fragmentation. Specifically, a higher score on the secure attachment dimension was associated with a greater degree of authentic self, which in turn, was associated with greater levels of emotional intelligence and having fewer fragmented cognitive concepts about the self and romantic relationships. On the other hand, a
higher score on the anxious-ambivalent attachment dimension was associated with lower degree of authentic self, which in turn, was associated with a lower level of emotional intelligence and having more fragmented cognitive concepts about the self and romantic relationships. Findings highlight the importance of the self for clearly understanding how the internal working models of attachment are manifested emotionally and cognitively.

**Lyons and Schneider (2005)** studied that Emotional intelligence (EI; the ability to perceive, integrate, understand, and manage emotions) may influence appraisals of stressful tasks and subsequent task performance. This study examined the relationship of ability-based EI facets with performance under stress. We expected high levels of EI would promote challenge appraisals and better performance, whereas low EI levels would foster threat appraisals and worse performance. Undergraduates ($N = 126$) performed mental math and videotaped speech tasks. Certain dimensions of EI were related to more challenge and enhanced performance. Some EI dimensions were related to performance after controlling for cognitive ability, demonstrating incremental validity. This pattern of findings differed somewhat for males and females.

**Raad (2005)** In this paper it is explored to what extent emotional intelligence can be expressed in terms of a standard trait model. Two studies were performed. In Study 1 a total of 437 items from several emotional intelligence questionnaires were used. The items were classified into the categories comprised by the Abridged Big Five Circumflex (AB5C) model. The majority of those items ended up in categories delineated by the factors Agreeableness (II) and Emotional Stability (IV) of the Big Five. Most of the items that were not classifiable were ambiguous or included other elements of difficulty such as conditional statements or negations. In Study 2 a large pool of 728 Big Five items was used. Those items were selected that could be considered relevant for the description of emotional intelligence. Three hundred and eight items considered relevant were factored on the basis of ratings available from an earlier study. This yielded a four factor structure of which the factors strongly related to four of the Big Five factors. In both studies the Big Five segments III + V+ and V + III+ were left rather untouched, emphasizing that rational and organized information processing is not captured by understandings of emotional intelligence.
Chan (2004) examined one hundred and fifty-eight secondary school teachers were assessed on their perceived emotional intelligence (Schutte et al., 1998) and general self-efficacy and self-efficacy toward helping others (Schwarzer, 1993). An item factor analysis yielded four dimensions of perceived emotional intelligence, leading to the construction of four corresponding empirical scales. Teachers scored most highly on positive utilization and emotional appraisal, followed by empathic sensitivity and positive regulation. Using the four components of perceived emotional intelligence as predictors of self-efficacy beliefs, positive regulation emerged as the significant predictor in predicting general self-efficacy whereas empathic sensitivity emerged as the significant predictor in predicting self-efficacy toward helping others. Implications of the findings for exploring the relationships between various components of perceived emotional intelligence and various specific self-efficacy beliefs for different groups of teachers and the need for further studies using longitudinal data are discussed.

Day and Carroll (2004) Despite claims that emotional intelligence (EI) predicts performance on work-related tasks and successful interpersonal interactions; little research exists to support these claims. In the present study, the construct and criterion-related validity of an ability-based measure of EI (Mayer, Salovey, & Caruso, 2000b) were examined. The four-factor model for the MSCEIT fit the data well. As hypothesized, there were some gender and experience differences in the MSCEIT subscales. The MSCEIT subscales were modestly correlated with personality, unrelated to individual-level citizenship behavior, and somewhat related to group-level citizenship behavior. Only the Emotional Perception Scale of the MSCEIT was correlated with performance on a cognitive decision-making task.

Robazza, Pellizzari and Hanin (2004) Objectives: To examine the effects of multimodal and individualised self-regulation strategies upon emotions and bodily symptoms of athletes’ psycho biosocial state and performance, within the Individual Zones of Optimal Functioning (IZOF) framework. Design: A multiple baseline single-subject design. Method: Eight male high-level Italian athletes (four goalkeeper roller-skating hockey players and four gymnasts) participated in the study. Procedures involved: (a) recall of idiosyncratic emotions and autonomic symptoms associated with best and worst performances; (b) identification of spontaneous idiosyncratic
psychological preparation procedures; (c) monitoring of precompetitive emotions across a competitive season; (d) implementation of an individual multimodal self-regulation programme; and (e) a social validation interview. **Results:** Preliminary empirical support was provided for the effectiveness of a mental training strategy to optimize precompetitive psycho biosocial states and to improve competition performance. Findings also supported the in/out-of-zone notion applied to perceived emotions and bodily symptoms. **Conclusions:** Further research is needed to replicate and extend study findings, explore additional concepts incorporated in the recent developments of the IZOF-psychobiosocial model, and develop effective intervention strategies.

Rooy and Viswesvaran (2004) used meta-analytic techniques to examine the relationship between emotional intelligence (EI) and performance outcomes. A total of 69 independent studies were located that reported correlations between EI and performance or other variables such as general mental ability (GMA) and the Big Five factors of personality. Results indicated that, across criteria, EI had an operational validity of .23 (k=59, N=9522). Various moderating influences such as the EI measure used, dimensions of EI, scoring method and criterion were evaluated. EI correlated .22 with general mental ability (k=19, N=4158) and .23 (Agreeableness and Openness to Experience; k=14, N=3306) to .34 (Extraversion; k=19, N=3718) with the Big Five factors of personality. Results of various subgroup analyses are presented and implications and future directions are provided.

Schulte, Ree and Carretta (2004) Cognitive ability and personality have long played central roles in the investigation of determinants of human performance. Recently, the construct of emotional intelligence (EI) has emerged in the popular literature as an additional explanatory concept for human behavior and performance. The ability conceptualization of EI proposed by Mayer, Salovey, and their colleagues involves the perception, assimilation, comprehension, and management of emotions. Its proponents consider it to be distinct from either general cognitive ability (g) or personality. The purpose of this study was to investigate the construct validity of EI by examining its relations to g and the Big Five personality dimensions of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The observed correlation between scores on the Wonderlic
Personnel Test (a measure of g) and EI was \( r = 0.454 \). A regression model that included three predictors representing g, the Big Five dimension of Agreeableness, and sex showed an \( R \) of 0.617. After correction for unreliability the multiple correlation became 0.806, showing a strong relationship. Based on these results, we question the uniqueness of EI as a construct and conclude that its potential for advancing our understanding of human performance may be limited. Implications and suggestions for future studies are discussed.

Warwick and Nettelbeck (2004) investigated Eighty-four tertiary students completed questionnaires measuring emotional intelligence (EI), personality, affiliation, abstract reasoning ability, emotional knowledge, and task orientation. Among personality variables, extraversion and agreeableness correlated moderately with total Trait Meta-Mood Scale (TMMS) \( (p<0.01) \), and weakly \( (p<0.05) \) with openness, conscientiousness and neuroticism. TMMS was also correlated with emotional knowledge \( (p<0.01) \) but not with abstract reasoning or interest in affiliation. Results from the same sample with the Mayer, Salovey, Caruso, Emotional Intelligence Test (MSCEIT) revealed inconsistencies between the two EI scales. Thus, openness, extraversion, conscientiousness, neuroticism and interest in affiliation were not significantly related to the MSCEIT, but agreeableness and emotional knowledge \( (p<0.01) \) and abstract reasoning ability \( (p<0.05) \) were. Results also found that EI as estimated by the TMMS, but not the MSCEIT, was correlated with task orientation \( (p<0.01) \); but this effect disappeared when personality was controlled for. Taken as a whole, the differential performance of the TMMS and MSCEIT supports a proposal for two distinct types of EI: trait EI and ability EI (Petrides & Furnham, 2000).

Ashkanasy, James, and Jordan (2003) review the literature on stress in organizational settings and, based on a model of job insecurity and emotional intelligence by Jordan, Ashkanasy and Härtel (2002), present a new model where affective responses associated with stress mediate the impact of workplace stressors on individual and organizational performance outcomes. Consistent with Jordan et al., emotional intelligence is a key moderating variable. In our model, however, the components of emotional intelligence are incorporated into the process of stress appraisal and coping. The chapter concludes with a discussion of the implications of
these theoretical developments for understanding emotional and behavioral responses to workplace.

Gohm (2003) In 3 studies (Ns = 250, 83, 236), an examination of differences in how individuals experience their emotions (meta-emotion traits of clarity, attention, and intensity) led to the identification of 4 distinct types (overwhelmed, hot, cerebral, and cool). When mood was manipulated, the types differed in how they initially reacted to the emotional situation, how they regulated their mood, and how they made judgments. In particular, one type of individual (the hot type) was more reactive to emotional situations than the others. Another type of individual (the overwhelmed type) regulated mood differently than the others, which led these individuals to make judgments that were also different. Overwhelmed individuals appeared unable or unwilling to avail themselves of critical affective information.

Ashkanasy, Härtel, Daus (2002) This article provides a review of recent developments in two topical areas of research in contemporary organizational behavior: diversity and emotions. In the section called “Diversity,” we trace the history of diversity research; explore the definitions and paradigms used in treatments of diversity, and signal new areas of interest. We conclude that organizational behavior in the 21st century is evolving to embrace a more eclectic and holistic view of humans at work. In the section called “Emotions,” we turn our attention to recent developments in the study of emotions in organizations. We identify four major topics: mood theory, emotional labor, affective events theory (AET), and emotional intelligence, and argue that developments in the four domains have significant implications for organizational research, and the progression of the study of organizational behavior. As with the study of diversity, the topic of emotions in the workplace is shaping up as one of the principal areas of development in management thought and practice for the next decade. Finally, we discuss in our conclusion how these two areas are being conceptually integrated, and the implications for management scholarship and research in the contemporary world.

Trinidad and Johnson (2002) conducted a study to explore the relationship between emotional intelligence (EI) and adolescent tobacco and alcohol use (TAU). Subjects were 205 multi-ethnic adolescents (52% male) from middle schools in southern California (mean AGE=12.63 years), 153 from a public school and 52 from a
parochial school. An abbreviated version of the Multifactor Emotional Intelligence Scale, Student Version [Mayer, J. D., Salovey, P., & Caruso, D. R. (1997). Multifactor emotional intelligence scale, student version. Durham, NH] was used to assess the EI of the students. EI was negatively correlated with a general, overall measure of tobacco and alcohol use, and with individual tobacco and alcohol scales and items. It is plausible that the adolescents with high EI may possess a greater mental ability to read others well and detect unwanted peer pressure. These abilities may have led to an increased resistance to TAU, thus explaining the negative correlations found in this study. Further research is needed to validate these findings.

Self-confidence

Hays et. al (2007) This study identified the sources and types of confidence salient to 14 (7 male, 7 female) successful World Class athletes. Nine sources of confidence were identified: Preparation, performance accomplishments, coaching, innate factors, social support, experience, competitive advantage, self-awareness, and trust. A testament to the multi-dimensional nature of sport confidence, six types of sport confidence were also identified: skill execution, achievement, physical factors, psychological factors, superiority to opposition, and tactical awareness. Gender was related to both the sources of confidence and the subsequent types of confidence experienced by the athletes. For example, females placed more importance on good personal performances than males who derived confidence from winning. Results were discussed in the context of previous sport confidence literature and implications for sport psychology and coaching practices were drawn.

Sabina and Stankov (2007) This paper examines the nature of the Self-confidence factor. In particular, we study the relationship between this factor and cognitive, metacognitive, and personality measures. Participants (N = 296) were administered a battery of seven cognitive tests that assess three constructs: accuracy, speed, and confidence. Participants were also given the Metacognitive Awareness Inventory (MAI, Schraw, G., and Dennison, R.S. (1994). Assessing metacognitive awareness. Contemporary Educational Psychology, 19, 460–475.), a personality measure of the Big Five factors and our own Memory and Reasoning Competence Inventory (MARCI). Results indicate the presence of separate Self-confidence and Metacognitive processes factors, and a moderate correlation (.41) between them. The
Self-confidence factor taps not only processes linked to performance on items that have correct answers, but also sureness level in beliefs about events that may never occur. A hierarchical multiple regressions showed that the Self-confidence factor was predicted by accuracy of performance, Metacognitive Awareness Questionnaire, and beliefs of competence in reasoning ability.

**Tim and Freeman (2007)** A sample of 222 university athletes (mean age 19.8 years, \( s = 2.0 \)), ranging in standard from university second team to international competitor, completed a measure of perceived support 2 weeks before an important competition or match. On the day before the competition or match, the athletes completed measures of stressors, stress, received support, and self-confidence. Moderated hierarchical regression analyses revealed the following key findings: (i) main effects for both perceived (\( \Delta R^2 = 0.11 \)) and received support (\( \Delta R^2 = 0.14 \)) upon self-confidence; (ii) stress-buffering effects for both perceived (\( \Delta R^2 = 0.02 \)) and received (\( \Delta R^2 = 0.07 \)) support upon self-confidence; (iii) when both aspects of support were considered simultaneously, stress-buffering effects were primarily attributable to the influence of received support. These results demonstrate the beneficial impact of social support on self-confidence, both directly and by reducing the negative effect of stress on self-confidence. Our findings emphasize the need to recognize the distinction between perceived and received support, both in terms of theory and the design of social support intervention with athletes.

**Stolz (2006)** The purpose of this experiment was to determine whether individuals in a room of 30, were able to perform motor tasks under positive and negative situations. Also the experiment was to determine to what affect the comments had on the subjects’ performance outcome. I used two experimental groups and one control group. I used one experimental group and gave them a lot of encouragement and positive words. In the other experimental group, I gave them a lot of negative and non-encouraging words. The students were randomly assigned to these groups. The 30 subjects were students living in Vaselakos Hall on campus at Missouri Western State College in St. Joseph, Missouri. The items I used were a garbage can, eight nerf balls, masking tape, a tally sheet, and fake questionnaires. The questionnaires were given to fool the students into thinking that they were going to be good, bad or average at the ahead task. Then while students received either positive or negative comments they shot five baskets each, as I tallied their score to the number made out of five. The
results showed that the students who received the negative encouragement and the poor grade on the questionnaire did more poorly than the students that received positive encouragement and good grades on the questionnaire. Although eight of the 30 students considered themselves athletic, there was no difference in shots made between the athlete and non-athlete with reference to what I would tell them. Therefore, I found the main interaction for the Group was significant, $f(2,24) = 7.258$, $p = .003$. These results have shown that there is a significant affect of self-confidence and self-efficacy in performance.

**Sheldon, et.al (2004) Objectives:** To examine performers' retrospective explanations for the relationship between self-confidence, competitive anxiety intensity, and symptom interpretation toward performance. **Method:** Semi-structured interviews were conducted with 10 elite performers to determine how self-confidence levels influenced the perceived effects of pre-competitive anxiety intensity and identify the confidence management strategies used to protect symptom interpretation. **Results:** Two causal networks were identified, showing self-confidence to influence the relationship between competitive anxiety intensity and symptom interpretation. In the absence of self-confidence, increases in competitive anxiety intensity were perceived as outside of the performers’ control and debilitating to performance. Under conditions of high self-confidence, increases in symptoms were reported to lead to positive perceptions of control and facilitative interpretations. To protect against debilitating interpretations of competitive anxiety, performers reported the use of cognitive confidence management strategies including mental rehearsal, thought stopping, and positive self-talk. **Conclusions:** The findings highlight self-confidence as an essential quality for elite athletes to possess in order to protect against potentially debilitating thoughts and feelings experienced in competitive situations.

**Hardy, Woodman, and Carrington (2004)** This paper examines Hardy's (*Anxiety, Stress and Coping: An International Journal* 1996) proposition that self-confidence might act as the bias factor in a butterfly catastrophe model of stress and performance. Male golfers ($N=8$) participated in a golf tournament and reported their cognitive anxiety, somatic anxiety, and self-confidence prior to their tee shot on each hole. All anxiety, self-confidence, and performance scores were standardized within participants in order to control for individual differences. The data were then...
collapsed across participants and categorized into a high self-confidence condition and a low self-confidence condition by means of a median split. A series of two-way (cognitive anxiety × somatic anxiety) ANOVAs was conducted on each self-confidence condition in order to flag where the maximum cognitive anxiety × somatic anxiety interaction effect size lay along the somatic anxiety axis. These ANOVAs revealed that the maximum interaction effect size between cognitive and somatic anxiety was at a higher level of somatic anxiety for the high self-confidence condition than for the low self-confidence condition, thus supporting the moderating role of self-confidence in a catastrophe model framework.

Tim and Hardy (2003) This meta-analysis (k = 48) investigated two relationships in competitive sport: (1) state cognitive anxiety with performance and (2) state self-confidence with performance. 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 State Anxiety Inventory-2 ($r = 0.19$) was significantly smaller than the mean effect size derived from studies using other measures of self-confidence ($r = 0.38$). Measurement issues are discussed and future research directions are offered in light of the results.

Lazar and Crawford (2002) This study investigates individual differences in confidence judgments made by subjects on the accuracy of their answers to psychological test items. A measure of reasoning ability (the Raven's Progressive Matrices, RPM), a vocabulary test, and a perceptual visual discrimination test, were administered to 271 subjects. For half of the subjects, feedback on the correctness of
response was given after each item, while for the other half, no such information was provided. In addition, measures of English and Mathematics self-concept were obtained. Confidence ratings from the Vocabulary test showed overconfidence, while those from the perceptual task showed under confidence. Confidence ratings from the perceptual task revealed poorer discrimination between correct and incorrect items than did those from the other two tasks. While feedback produced better discrimination, and slower responding for the RPM test, higher confidence rating and bias scores were obtained for the Vocabulary test. Correlations between the confidence judgment scores indicate that there is a separate self-confidence trait that is different from ability factors reflecting the speed and accuracy of performance on cognitive test items. English self-concept was found to share low correlation with Vocabulary accuracy and confidence rating measures, a result that was analogous to that obtained for Mathematics self-concept and RPM test score. The results of this and earlier studies are discussed in terms of the construct of self-confidence and in relationship to intelligence theories and personality.

**Jones G (2002)** The literature on mental toughness is characterized by a general lack of conceptual clarity and consensus as to its definition, as well as a general failure to operationalize the construct in a consistent manner. This study addressed two fundamental issues surrounding mental toughness: how can it be defined? and what are the essential attributes required to be a mentally tough performer? Ten international performers participated in either a focus group or one-to-one interviews, from which a definition of mental toughness and the attributes of the ideal mentally tough performer emerged. The resulting definition emphasized both general and specific dimensions, while the 12 attributes covered self-belief, desire/motivation, dealing with pressure and anxiety, focus (performance-related), focus (lifestyle-related), and pain/hardship factor.

**Robin, et.al (1998)** The purposes of this study were to identify sources of self-confidence in athletes within the sport-confidence framework of Vealey (1986, 1988), develop a reliable and valid measure of sources of sport-confidence, and extend the conceptual framework of sport-confidence to include sources and test predictions within the expanded model. In Phases 1, 2, and 3 of the study, the preliminary conceptual basis for sources of sport-confidence was developed and initial psychometric evidence supported the factor structure, reliability, and validity of the
Sources of Sport-Confidence Questionnaire (SSCQ) with 335 college athletes. In Phase 4, a confirmatory factor analysis supported the hypothesized nine-factor structure of the SSCQ using 208 high school basketball players as participants. The theoretical and practical significance of certain sources of confidence in building stable and enduring self-confidence and motivation in sport are discussed based on the study results. Key words: self-confidence, sources of sport-confidence, psychometrics, sports motivation.

Sandra, et.al (1996) Despite the advocacy of a confidence-enhancing function of mental imagery, the relationship between confidence and imagery has received little attention from sport researchers. The primary purpose of the present study was to identify the specific image content of confident athletes. Fifty-seven elite competitive roller skaters completed the Movement Imagery Questionnaire-Revised (MIQ-R), the Sport Imagery Questionnaire (SIQ), and the State Sport Confidence Inventory (SSCI). Results revealed that high sport-confident athletes used more mastery and arousal imagery, and had better kinesthetic and visual imagery ability than low sport-confident athletes did. A hierarchical multiple regression analysis revealed that mastery imagery accounted for the majority of variance in SSCI scores (20%). The results of this study suggest that when it comes to sport confidence, the imaged rehearsal of specific sport skills may not be as important as the imagery of sport-related mastery experiences and emotion.

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Ronald, et.al (1995) Confirmatory factor analysis was used as the basis for a new form of the Athletic Coping Skills Inventory (ACSI). The ACSI-28 contains seven sport-specific subscales: Coping with Adversity, Peaking under Pressure, Goal Setting/Mental Preparation, Concentration, Freedom From Worry, Confidence and Achievement Motivation, and Coach ability. The scales can be summed to yield a Personal Coping Resources score, which is assumed to reflect a multifaceted psychological skills construct. Confirmatory factor analyses demonstrated the factorial validity of the ACSI-28, as the seven subscales conform well to the underlying factor structure for both male and female athletes. Psychometric characteristics are described, and preliminary evidence for construct and predictive validity is presented.

Robert, et.al (1994) The present study answered Lirgg's (1991) call for confidence studies employing a feminine-typed task by assessing self-confidence and gender appropriateness in college cheerleading. Questionnaires assessing self-confidence and the gender appropriateness of cheerleading and its five subtasks (cheers and motions, partner stunts, jumps, tumbling, and cheerleading dance) were administered to college cheerleaders and to noncheerleader college undergraduates. It was hypothesized that females would possess more self-confidence in their ability at cheerleading and its various subtasks than would males, and that cheerleaders would rate their sport as less gender-stereotyped than would noncheerleaders. MANOVA results supported these hypotheses. On only two subtasks, partner stunts and tumbling, males possessed as much confidence as females did. Females reported more self-confidence on cheerleading and all other subtasks. Furthermore, cheerleaders of both sexes were aware of the stereotypes held by others, but viewed cheerleading and the tasks within it as more gender neutral than did noncheerleaders.

Williams, Krane (1992) Four stress coping styles in intercollegiate golfers (N = 112) were differentiated based on low and high combinations of repressive defensiveness (scores on the Marlowe-Crowne Social Desirability Scale) and competitive trait anxiety (scores on the Sport Competition Anxiety Test). The results indicated biased responding on the Competitive State Anxiety Inventory-2 (CSAI-2) occurs only for repressors (high Marlowe-Crowne, low competitive trait anxiety). Repressors reported higher self-confidence and similar state anxiety as that reported by truly low anxious subjects (low Marlowe-Crowne, low competitive trait anxiety). High social
desirability responders who were considered defensive high-anxious (high Marlowe-Crowne, high competitive trait anxiety) did not deny disturbing pre-competition cognitions. When predicting tournament performance with the CSAI-2 subscales, over twice as much variance was accounted for with repressors (assumed to have distorted responses) deleted compared to when all golfers were included. There was no evidence that a repressive coping style deters performance. Future researchers and practitioners need to examine whether or not athletes classified as repressors present themselves favorably when responding to anxiety and confidence questions. They also need to determine if a repressive coping style is effective or maladaptive in dealing with performance demands.

**Cathy and Lirgg. (1991)** The apparent lack of self-confidence in physical activity by females compared to males has been a recent concern of some researchers in sport psychology. Lenney suggested that females would be less confident than males when the task was male oriented or when the situation was competitive. This meta-analysis was conducted to examine the magnitude of gender differences in self-confidence in physical activity according to Lenney's assertions. An overall nonhomogeneous effect size of 0.40 favoring males was found. Although masculine tasks produced a larger effect-size difference than neutral tasks, it was also not homogeneous. Only one study employed a feminine task, resulting in a large effect size favoring females. However, the results of a regression analysis, which found that sex-type of task contributed to gender differences in self-confidence, did support Lenney's contention. Whether or not the task took place in a competitive situation did not differentially affect the magnitude of the gender differences. Age of subject and type of confidence measure employed are also discussed as possible variables contributing to gender differences in self-confidence.

**Graham, et.al (1991)** This study examined changes in, and antecedents of, cognitive anxiety, somatic anxiety, and self-confidence in a sample of male (n=28) and female (n=28) university athletes. Subjects responded to the Competitive State Anxiety Inventory-2 (Martens, Burton, Vealey, Bump, & Smith, 1990) and six antecedent items during the week preceding an important competition. In the case of cognitive anxiety, males showed no change across time; females showed a progressive increase as the competition neared. Males and females showed the same patterning in somatic anxiety with increases occurring only on the day of competition. Self-confidence
scores revealed a reduction in self-confidence as the competition neared in both
genders, but there was a greater decrease in females than in males. Stepwise multiple
regression analyses showed that different antecedents predicted cognitive anxiety and
self-confidence in males and females. Specifically, significant predictors in the
females were associated with personal goals and standards; significant predictors in
the males were associated with interpersonal comparison and winning.

Jeffrey, et.al (1991) We examined the relationships among trait and state
psychological variables and performance in male high school distance runners using
the Sport Orientation Questionnaire (SOQ; Gill & Deeter, 1988), the Competitive
Orientation Inventory (COI; Vealey, 1986), the Trait Sport-confidence Inventory
(TSCI; Vealey, 1986), the State Sport-Confidence Inventory (SSCI; Vealey, 1986),
the Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Burton, Vealey, Bump,
& Smith, 1990), and separate self-efficacy scales for performance (time) and outcome
(place). As hypothesized, trait sport-confidence predicted state sport-confidence and
outcome self-efficacy. However, competitive orientation did not contribute to the
prediction of state measures. State sport-confidence and self-efficacy predicted
performance, as hypothesized. Surprisingly, outcome self-efficacy was a stronger
predictor than performance self-efficacy, which did not contribute to the prediction of
performance time or place. The runners' youth and lack of competitive track
experience may have prevented them from forming accurate performance self-
efficacy judgments. In contrast, the familiar and small competitive field may have
allowed these athletes to form accurate outcome self-efficacy judgment.

Robin, et.al (1988) This study was conducted to (a) determine what achievement goal
orientations are present in adolescent figure skaters, (b) examine the relationship
between the goal orientations conceptualized by Maehr and Nicholls (1980) and those
conceptualized by Vealey (1986), and (c) investigate the influence of different goal
orientations on the precompetitive self-confidence, precompetitive anxiety, and actual
performance of adolescent skaters. Subjects included 106 youth figure skaters
participating in regional competition. Skaters were found to have two achievement
goal orientations which were termed extrinsic and task orientations. Some support was
found for the relationship between the achievement orientations and the sport-
confidence/competitive orientation constructs of Vealey. Also, a multivariate
relationship was supported between the sport-confidence/achievement orientation
predictor constructs and the self-confidence, anxiety, and performance of adolescent figure skaters in sport competition. Results were discussed based on developmental characteristics of adolescent athletes and the socially evaluative achievement context of sport. The need to decrease the threatening nature of competitive sport for adolescents by emphasizing intrinsic enjoyment and the pursuit of personal performance goals is advocated.

Robin S. Vealey (1986) An interactional, sport-specific model of self-confidence was developed in which sport-confidence was conceptualized into trait (SC-trait) and state (SC-state) components. A competitive orientation construct was also included in the model to account for individual differences in defining success in sport. In order to test the relationship represented in the conceptual model, an instrument to measure SC-trait (Trait Sport-Confidence Inventory or TSCI), an instrument to measure SC-state (State Sport-Confidence Inventory or SSCI), and an instrument to measure competitive orientation (Competitive Orientation Inventory or COI) were developed and validated. Validation procedures included five phases of data collection involving 666 high school, college, and adult athletes. All three instruments demonstrated adequate item discrimination, internal consistency, test-retest reliability, content validity, and concurrent validity. In the construct validation phase, the results supported several predictions based on the conceptual model.

Mental skills

Gucciardi, Gordon, (2009) The purpose of this study was to evaluate the effectiveness of two different psychological skills training (PST) packages in enhancing mental toughness among three youth-aged (under 15 years old) Australian football teams. We compared a program targeting the keys to mental toughness identified previously (Gucciardi, Gordon, & Dimmock, 2008) with a more traditional PST program targeting self-regulation, arousal regulation, mental rehearsal, attentional control, self-efficacy, and ideal performance state as well as a control group. Overall, both intervention groups reported more positive changes in subjective ratings of mental toughness, resilience, and flow than the control group. Similar ratings for mental toughness were reported by the parents and coaches. Both PST packages appeared to be equally effective in enhancing mental toughness.
Gucciardi, Gordon, & Dimmock (2009) The general purpose of this study was to follow-up on quantitative data regarding the effectiveness of two different types of multimodal programs in enhancing mental toughness among youth-aged Australian footballers (Gucciardi, Gordon, & Dimmock, 2009a). Specifically, we aimed to enhance the interpretability and meaningfulness of the quantitative data by eliciting key stakeholders’ (athletes’, parents’, and coaches’) perspectives on the goals, procedures, and results of the mental toughness training intervention through one-on-one interviews. Ten players, one of their parents (5 fathers and 5 mothers), and 3 coaches were interviewed. A thematic content analysis using the constant comparison method was performed on the transcribed verbatim data. Participants described several benefits of the program: valuing the importance of quality preparation, being more receptive to criticism, team cohesion, an increased work ethic, tougher attitudes, and the development and identification of transferable skills. Four processes including enhanced self-awareness, techniques for self-monitoring, techniques for self-regulation, and multiple-perspective discussions were identified by participants as ways that the program contributed to enhanced mental toughness. Finally, increased parent involvement, parent and coach education programs, and multi-source assessments and feedback were highlighted by participants as avenues for improving future developmental programs.

Bernie (2008) over the past two decades, mental skills training (MST) has experienced a tremendous surge in popularity, yet MST is not without its critics, including some athletes and coaches. Additionally, a number of concerns have arisen about mental training effectiveness, and its ability to maximize athlete development, performance, and peaking. Periodization is a systematic program development and implementation strategy that holds promise for enhancing mental training effectiveness and combating some of the problems currently limiting MST interventions. Thus, the purpose of this conceptual paper was threefold. First, periodization concepts are introduced by demonstrating how they are utilized to systematically guide physical training. Second, strategies to adapt periodization concepts to enhance mental training programs are examined, along with techniques to integrate physical and mental training, including: mental training tool and skill periodization plans and mental training drill menus. Finally, a case study is presented to illustrate how an integrated approach to periodized training that targets both
physical and mental skill development can enhance the effectiveness of MST while minimizing implementation problems.

**Gucciardi, Gordon, Dimmock (2008)** A personal construct psychology (PCP; Kelly, 1955/1991) framework was employed in an attempt to reveal a holistic understanding of mental toughness in the context of Australian Football. Eleven male coaches (M age = 42, SD = 9.62) with considerable playing and coaching experience at the elite level were interviewed using a PCP-based interview protocol. Transcribed verbatim data were analyzed using grounded theory procedures. Three independent categories (characteristics, situations, behaviors) were inductively derived and integrated into a model in which the importance of understanding each component individually was emphasized. The relationship between these three central categories was also highlighted. Results identified the key mental characteristics and their contrasts together with those situations that demand mental toughness, and the behaviors commonly displayed by mentally tough footballers. Conceptualized in the context of these three categories, mental toughness in Australian Football can be considered as a buffer against adversity but also as a collection of enabling factors that promote and maintain adaptation to other challenging situations. Practical implications of the findings are discussed and focus on issues pertaining to enhancing and/or developing mental toughness.

**Mamassis, Doganis (2004)** 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 posttest. Moreover, the intensity of self-confidence, as well as the overall tennis performance, were 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.

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Gould (1999) Junior tennis coaches \( N = 153 \) were surveyed to determine their opinions about the importance of mental skills training, the specific mental skills they teach, strategies they use to teach mental skills, and recommendations for making mental skills training more effective. Mental skills thought to be most difficult to teach included reframing pressure, crisis management, self-confidence, and emotional control. Roadblocks to mental skills training included a lack of time, a lack of player interest, difficulty evaluating mental skills training success, and a lack of models or examples of coaches actually teaching mental skills. Coaches also indicated a need for practical mental skills training exercises that could be taught in 10-15 minutes, strategies for better engaging players in mental skills training, and the need for mental skills training videos to use with players. Differences in the coaches' opinions were compared between more and less experienced and sport psychology trained and untrained coaches.
**Grove, et.al (1999)** The evaluation of the effectiveness of mental skills training programs is an important feature of clinical practice and justification. The "Transtheoretical Model" offers an appropriate framework for theory-based evaluation of mental skills training. Stages of change are listed below and have been incorporated into the *Stages of Change Questionnaire*. Precontemplation - not considering behavior change. Contemplation - considering but have not implemented behavior change. Preparation - taken preliminary steps toward behavior change. Action - regularly engaging in a new behavior but for less than six months. Maintenance - engaging in new behavior for more than six months. Male youth baseball players (N = 37) participated in a weekly group mental skills program that focused on six general mental skills: control of nerves and tension, concentration, emotional control, use of imagery, self-confidence, and planning, analysis, and goal setting. Treatment group Ss attended over 90% of the group sessions and averaged 23 of a possible maximum of 30 diary entries during the six-week intervention program. Use of the mental skills presented in the program increased significantly in the intervention group but changed insignificantly in the control group. A significant difference between the groups still existed at a three-month follow-up. The proportion of treatment group participants in the action or maintenance stage was 40% pretest, 90% posttest, and 75% at follow-up. For the control group, the percentages for the same periods were 47%, 24%, and 48%. The *Stages of Change Questionnaire* is an effective tool for evaluating the success of mental skills training programs.

**Hanton, & Jones, (1999)** This study extends the findings of previous research that elite performers, compared to nonelites, interpret their pre-performance cognitive and somatic anxiety symptoms as more facilitative than debilitating to performance. In-depth interviews were conducted with male elite swimmers (N = 10) and content analyzed. It was concluded that participants' skills and strategies were acquired via natural learning experiences and various education methods. Four areas of developmental themes throughout the swimmers' careers were revealed. They are listed below. Early unwanted negative experiences. Developmental experiences taught how to cope with or remove these. Negative competition cognitions -- e.g., Doubts about adequacy of training to support intended good performances; not knowing what to do to achieve performance goals; letting the team down; making mistakes. Negative somatic feeling states -- e.g., feeling sick before a race; not sleeping the night before a meet; tired before a race; constant nervousness. Learned at an early age
that nerves can be positive. Early race preparation facilitation -- e.g., nothing that one can do about how they feel so get on with racing: This was primarily learned from significant others (coaches, older swimmers, parents). Early aiding of performance -- e.g., prerace nervousness was related to swimming better; it facilitated "psyching-up." Cognitive labeling of symptoms as positive -- e.g., using terms such as "positive anxiety" or "energizing arousal." Precompetition routine that maintained a facilitative mind-set. Imagery -- e.g., training and skill practice imagery related to race simulation; formulation of a task-specific and race relevant series of behaviors. Goal-setting -- e.g., for training and competition with both sets being related. Prerace routine, comprising a familiar set of behaviors that are performed in the prerace period. Those behaviors facilitate nervousness and focus mental content on the impending task. Rationalization of thoughts -- e.g., any thinking is related to coping with the impending race. Control over feelings and thoughts -- e.g., doing planned activities that are related to good performances using techniques such as self-talk, positive thinking, writing down strategies. Internal control -- e.g., concentrating on factors over which the athlete has control. External control -- e.g., acting positively and planned to "psyche-out" that other athletes. Positive prerace imagery -- e.g., rehearsing races and winning. Physical strategies -- e.g., doing physical warm-up, stretching, and keeping-warm routines. Relaxation -- e.g., performing either a mental or physical relaxation strategy prior to the impending race. There are mental skills that need to be learned and practiced to facilitate good competitive performances.

**Huddleston, & Thiese, (1999)** Female collegiate swimmers (N = 147) from 10 midwestern university teams completed a questionnaire concerning the use of mental skills. Ss were divided into sprint and long distance performers. Goal-setting (66.7%), self-talk (40.1%), and music for psyche-up (27.9%) were the most frequently indicated skills. Of lesser frequency were focusing internally, imagery/visualization, and music for relaxation. Activities rarely reported as being used included autohypnosis, autogenic training, blank mediation, bracing, color, cue words, mantra meditation, and Transcendental Meditation. There were no differences between sprint and long-distance swimmers concerning the types of mental skills used. Female collegiate swimmers reported a low use of mental skills.

**Rushall, (1995)** How an athlete should act at a contest site is a frequently discussed topic, but one which has been subjected to little investigation. Most coaches have
their personal recipe for what should be done. Some research has described what champion athletes do to prepare themselves for an important competition for the duration of the time at the contest site. This exercise describes those behaviors and activities as being a model for emulation. Everything that is done at the competition site should be planned. This is where competition performances can be affected dramatically by seemingly insignificant events. The initial activities that occur after arriving at the venue will "set the stage" for the activities to follow. There are some assumptions that underlie the proposals contained in this exercise. They are as follows.

1. The duration of the time at the contest site should be spent in athlete preparation, not in recreational activities such as, watching other performers and socializing with out-of-sport friends.
2. The activities and thoughts that are pursued should be planned and practiced.
3. The activities and length of time of the preparation vary considerably between individuals, which means that team sport preparations have to accommodate this diversity rather than stifling them under the concept of the "team."
4. An athlete's preparation should manifest certainty, positivism, a gradual narrowing of focus, and a path leading to the most desirable readiness state.
5. There are two stages to on-site competition preparation. The first is warming-up and establishing a mind-set, and the second is a contest build-up routine. Figure 7.3.1 illustrates this concept and its major features.
6. For each activity an objective outcome (thought, feeling, or performance level) should be planned. Progression through this phase is determined by attaining these experiential outcomes.

The preparatory behaviors and thoughts have to be acceptable, appropriate, and effective. An athlete's intention should be to eventually construct a script of mental and physical behaviors that will always result in the best readiness state at the contest start. Thus, activities should be planned to attain certain objectives. Their practice at training should produce consistent athlete experiences, perceptions, and confidence in their benefits. An athlete's experiences during on-site preparations have to be self-controlled. Precautions need to be taken to minimize the occurrence of negative emotional events. This is achieved by having athletes only concerned with their activities during this preparatory stage. Athletes should be shielded as much as
possible from emotional involvement with others. This requirement leads to a number of concerns. Athletes should not be encouraged or required to watch other performers. If they vicariously identify with another unsuccessful person or team, then that empathy can be a significant negative event at this most critical stage of psychological preparation. For example, if a young gymnast watches her "idol" fall off a piece of apparatus, her self-efficacy is likely to be negatively impacted. Another example, occurs when a first grade team watches, usually under the guise of team spirit, a minor grade team lose. The more severe the loss, the greater will be the negative impact. As a rule-of-thumb, it is best to have athletes not watch any performance prior to their contest. That will serve to minimize the negative potential of the watching behavior. There should be an attempt to keep athletes away from individuals lacking in knowledge about good preparatory procedures and thoughts. Such a group includes friends from outside of the sport, parents and relatives, the press, and opponents. This isolation will reduce the likelihood of inappropriate distractions, personal interactions, and participation in "psyching-out" games. These disruptive events should be avoided. Each athlete should consciously consider how, when, and who they will interact with during the total preparatory period at the contest site. The behaviors and thoughts that occur should be predictable in their effect. This can only be achieved if every preparation for an important competition starts from a baseline or standard state (a set of feelings and thoughts). Thus, a procedure should be devised that first attempts to achieve a set level of readiness that is the same no matter when or where the competition is. It then proceeds with deliberate activities that gradually increase competition readiness, narrow the focus of attention, increase the degree of isolation, and physically and mentally prepare the athlete in the most desirable manner possible. An athlete should not plan on how much work or how many repetitions of each activity should be performed. The quantity of preparatory activities is influenced by factors such as climate, atmosphere, and the physical state of the athlete when arriving at the site. Thus, progress through a preparatory stage should be governed by attaining performance standards and feelings, not by completing absolute quantities of exercises. The following steps require an athlete to decide upon the content of these important factors. Decisions should be evaluated under simulated and real conditions with a view to eventually producing an ideal form of initial contest preparation that prepares an athlete mentally and physically.
Rushall, (1995) Performance outcomes are more likely to be achieved when what is done prior to and during a competition has been planned, practiced, and shown to be successful. In contests, an athlete should never use new approaches, techniques, or strategies without them first being tested, refined, and trained. An athlete should compete with only what is known and has been practiced. Athletes can learn to think very clearly in physical activity. Training sessions need to combine thinking practice with physical practice to allow the skill of thought control to develop so that it can be used in a competition. Mental functioning should be trained for physically stressful conditions. At all times, in practices and competitions, an athlete should remain in mental control. The initial stages of developing this capacity will require concerted effort by the athlete. The development of strategies, with the athlete having the major portion of content decision-making, produces an enhanced approach to competing. Strategies must be specific in content and extreme in detail. They should be of sufficient volume to consume and direct all the thinking that occurs in a competition. The affects on performance of this athlete-centered approach to competing are:

i. uncertainty and interpretive distractions are reduced;
ii. the stress of negative situations is reduced;
iii. performance consistency is enhanced;
iv. the coping capacity for problem situations is improved; and
v. Performance drop-offs are minimized.

When athletes are given the major responsibility for planning and deciding what is to be included in competition strategies, performances are enhanced. This differs to the common practice of the coach “instructing” an athlete what to do in a contest with minimal athlete input. Competition strategies consist of developing all the thoughts and consequent behaviors which need to occur in an actual contest. This content must be the only thought activity that occurs. Distractions and irrelevant thoughts must be eliminated. There are some significant structures that need to be included in the way competition strategies are formed. If the event is of long duration, it needs to be broken into partitions. Those partitions should be short enough for the athlete to totally concentrate on what needs to be thought and done at that time. This assists focusing on the completion of successful competition elements. Structuring performances in this manner is called "segmenting." How and what an athlete thinks during a contest is of paramount importance to maintaining maximum performance.
efficiency and exertion. The exercises in this section embrace three forms of thought content, i) task-relevant, ii) positive self-statements, and iii) mood words. Those types of thoughts have been shown to increase the level of performance in training and competitions in elite athletes. The energy of performance should not be used only for physical exertion. Thought intensities during a contest need to change if athletes are to remain in control of their efficiency and combat fatigue or pain. The exercise involving "intensification" addresses this modification of thought effort. Each competitive effort produces information that could assist in beneficial planning of subsequent training sessions and competitions. To maximize the value of that information, it is necessary to evaluate the feedback from competing when it is richest and strongest, that is, immediately after a contest. Thus, post-performance debriefing is proposed as an essential feature of competition strategy execution. It promotes the maximum learning potential of a competitive experience, a feature that is lost if it is delayed too long after a performance. The exercises contained in this section cover the psychological content of competition strategies. Primarily the athlete should provide the particular content that is essential for each sport. The athlete is the person who best knows his/her knowledge, most meaningful descriptions of task-relevant items, and significant language. There often is a tendency for coaches and consultants to tell athletes what they should be thinking of and concentrating on in competitions. Unfortunately, such advice is often wrong. Coaches have to rely on their effectiveness as teachers at training and practice for developing the knowledge and skills that are to be "transferred" to competitive situations by athletes. Each athlete interprets a coach's instructions and teachings in a unique manner. Unless that unique understanding is allowed to surface in competitions, athletes will perform with foreign content in their competitive repertoires, a factor that will not enhance performance and usually is more counterproductive than beneficial. Athletes should form competition strategies with advice from coaches. The content of competition strategies has to be developed in a step-like fashion (the order of exercises presented in this section is a sequence that has proven to be successful), and practiced at training. It is an aspect of mental skills training that should be included in practice activities.

Rushall (1995) One of the principal aims of strategy use is to maintain control throughout a contest. As a performance progresses there is the potential that an athlete's focus and concentration will diminish. There are external factors and internal events that could distract concentration. As an athlete tires, either through physical or
psychological fatigue, the symptoms of that fatigue emerge as very strong
distractions. The process of psychological intensification needs to be incorporated
into a strategy to cope with this problem and maintain concentration control
throughout a performance. A major pain theory suggests that while the mind is kept
very busy and totally focused on some task-relevant and positive activity, the brain
will not recognize fatigue or pain. This means that if an athlete can keep attention
totally involved with mental activity (positive strategy content), then control, despite
fatigued states, will be maintained. The implication of this principle is that an athlete
should keep his/her mind totally occupied with thought content during a contest. As
the pain or distraction potential of fatigue increases, the intensity of contest-relevant
thinking also has to increase in order to maintain performance control. Psychological
intensification is used to guard against incurring the detrimental effects of fatigue. It
stops complacency, loss of control, and loss of focus by requiring thought content and
the intensity of thinking to gradually increase as fatigue develops. In the early stages
of a competition when there is no fatigue or the level of effort is in a "steady-state", an
athlete does not have to think too intently. The main aim should be to keep in control
of the performance and execute strategy content. With most athletes, there is a stage
in a contest where it is realized that extra effort is needed to continue. Europeans call
that stage the "stopping-wish" point. Before or at that stage is where thought control
needs to be intensified otherwise performance could deteriorate. There are many ways
of intensifying one's thoughts. For example, one can: i) think faster; ii) change the
nature of the thought content (e.g., increase the amount of task relevant content), iii)
think harder by putting more "effort" into the concentration process; iv) increase the
sound volume and emotionality of thoughts; v) "picture" what has been written down
on strategy worksheets in increasingly larger letters; vi) mutter out loud; and vii)
combine a number of these activities. Some athletes like to introduce a variety of
stages of intensification during a competition. At certain times they increase the
manner of intensifying their thoughts so that their thinking progressively becomes
more intense as the potential for distraction increases. For example, in rowing races
some elite rowers go from normal thinking to stage 1 intensification, then to stage 2,
stage 3, and finally stage 4. At each stage they introduce more elements and methods
for increasing the thought intensity that is required for controlling their sporting
efficiency. For very long competitions, stages for recommitment to intensified
thinking are useful. In those cases, the intermittent evaluation of the quality of
thinking is very helpful for maintaining an effective focus on thought control.
8.8.1 illustrates a simplified graph of the relationship between thinking, thought content, and fatigue. A stylized fatigue curve is depicted with the intensification development being in concert with the onset of fatigue. There are some noteworthy features about the illustrated relationship between fatigue and the conduct of thinking.

1. While in a non-fatigued or non-bored state, an athlete does not have to think too intently. The principal aim should be to keep controlled and focused on the task, that is, follow a planned strategy.

2. Just prior to the recognition of increasing fatigue, the thought processes are changed. At that stage the athlete introduces technique items of concentration which aim to maintain high levels of skill efficiency. The athlete makes a deliberate attempt to concentrate better by attempting to focus more intently on strategy content. The rate of thinking starts to increase, a trend that continues for the remainder of the competition.

3. Towards the end of the contest, the subjective symptoms of fatigue become more intense. Before that stage occurs, thought intensification should be increased further through an even more deliberate focus on thinking and a major emphasis on controlling the technical efficiency of sporting actions. The ratio of mood words and positive thinking to task-relevant content remains the same. It is the volume and intensity of thinking that increases. That increase blocks the recognition of fatigue. If an athlete was to relax the intensification process during this latter phase, fatigue sensations would be recognized and performance would deteriorate drastically. There is little chance of recovering the level of performance once that interference occurs. Relaxing or losing control in the very final part of a contest accounts for many athletes failing at that very critical stage.

The intensification process relies heavily on the athlete developing various and different methods of thinking. If one was to concentrate too long on one item, it is possible that a rhythmical form of thinking could develop. A lack of continual thought vitality is counter-productive to good competing. Frequently changing content and thought modes is important in the intensification process. Another feature of intensification, is the timing relationship between changes in thought intensity and changes in fatigue. Thought intensity should increase before fatigue increases. If this is done fatigue is not given a chance to interrupt the conduct of the strategy. If an
athlete were to wait until fatigue sensations increased and were recognized, then he/she would have to cope with fatigue instead of executing the primary strategy at critical stages in the competition. By preempting fatigue changes with intensification, the athlete maintains a preferred-action orientation that is most desirable for producing maximum sporting performances. Psychological intensification maintains concentration control. That control will facilitate maximum levels of sporting performance. To summarize this section, psychological intensification has the following characteristics.

1. It is developed so that the volume and intensity of strategy thinking blocks the recognition of physical or psychological fatigue.
2. The nature, content, and intensity of competition thinking changes as a contest progresses.
3. The ploys used to intensify differ depending upon the athlete; one should chose those thought actions that are successful and comfortable.
4. The further one progresses in a contest, the more difficult it is to recapture concentration and control if a disruption occurs.
5. Intensification uses planned strategies and requires an athlete to concentrate "harder" as a competition progresses. Changes in the level of intensification should occur prior to predicted increases in fatigue.

Mace, & Carroll,(1989) Females (N = 18) were pre-tested on a ground level bench. Various psychological and performance measures were taken. They were then divided into two groups, one receiving stress inoculation training (seven sessions) that involved relaxation, imagery, and self-statement skills. The control group received seven training sessions in coordination exercises. All Ss were then retested on a 1.52 m bench. The stress inoculation trained group reported significantly less stress prior to the final test and performed significantly better. There was no difference in HRmax. Stress inoculation (a form of mental skills training) facilitated a better approach to a stressful task as well as increased performance.

Murray, (1975) It is common for people to express negative feelings towards problem situations. The degree of negativeness (e.g., being scared to confront the problem; believing that bad consequences will result no matter what is done) slows eventual problem solution. While athletes are in a state of non-resolution of conflicts, their training and competitive performances will suffer considerably. When an
individual is confident that solutions to problems can be developed, and that those solutions can be coped with even if they are not particularly desirable, problem solving is prompt and minimal in its disruption of athletic performance. This effect even occurs with avoidance-avoidance situations (a conflict where both solutions have negative characteristics for the individual). It is in an athlete’s best interests to solve all conflicts as quickly as possible even when only negative outcomes are likely. That provides the opportunity to commence coping with and diminishing the impact of the result. When assisting athletes to resolve problems, it is a good counseling strategy to: emphasize what can be done by the athlete (reinforce the perception of self-control), analyze the outcomes from either of the conflict choices (develop an expectation of and preparedness for what will eventuate), and determine what positive outcomes will result from purely resolving the conflict. Having a plan for action to resolve conflicts and how to handle all possible outcomes will lead to fast actions and a potentially good level of coping.

OVERVIEW OF THE REVIEWS

From these reviews it is clear that emotional intelligence, mental skills and self-confidence may influence the performance level of the soccer players of any level. Relax! Concentrate! Focus! How many times have we heard a player or coach use words or phrases such as these during a practice or game? Of course, such directions are used frequently. Players and coaches would all agree that success in sports is due to the combination of both physical and mental skills. The ratio of the importance is a matter of debate. Some feel that the game is 80 percent mental and 20 percent physical, while others may have reversed these numbers. From the related studies it is found that a wide range of mental skill, self-confidence and emotional intelligence need to be developed in order to gain optimum level of performance. Mental training is a proven tool which can enhance performance at any level at any sport. It is also has tremendous carry over value to other areas of an athlete’s life. Being able to handle stress, turn negative self talk to positive self talk and be self motivated are all valuable life skills which are important not only in athletes performance but also in the broader pursuit of personal potential.