Chapter II

Review of Related Literature
CHAPTER II

REVIEW OF RELATED LITERATURE

Review of literature reveals a number of investigations examining coping skills and coping strategies among athletes. Very few studies have explored the significance of social support as a vital aspect of stress management and coping among athletes.

The first section of the reviews focuses on studies relating to stress among athletes, and coping strategies/coping skills among sportspersons. The second section provides a narration of significance of social support to athletes. The third section examines the studies conducted on self concept and self esteem among sportspersons. Finally, a collection of studies exploring the dynamics of social support, coping skills and self concept are dealt with.

2.1 Studies relating to Stress, Coping Styles/Coping Strategies among Sportspersons

The aim of the study by Sheikh and Afshari (2012) was to investigate differences in stress coping styles between athletic and non-athletic students with high and low self-esteem. For this purpose, 465 students (118 females and 347 males, mean age 23.58±3.20 years) were selected by available sampling method. The questionnaire of coping styles (Dadsetan et al. 1984) and self-esteem (Rosenberg, 1987) were used to evaluate the variables of coping styles and self-esteem. The collected data were analyzed through descriptive statistics and MANOVA statistical models. The findings showed a significant difference in sport condition among coping styles. Also, a significant difference existed in self-esteem levels among coping styles. There was a significant interaction between sport condition and self-esteem in these coping styles.
The findings showed that non-athletes with low self-esteem, non-athletes with high self-esteem, athletes with low self-esteem and athletes with high self-esteem respectively used lowest to highest level of active coping style. There was an interaction between physical activity level and self-esteem level in inflexible coping styles. Non-athletes used this coping style almost to the same extent. Athletes with high self-esteem and athletes with low self-esteem respectively used this coping style more than other groups.

The objectives of the study by Roness (2011) were to investigate: (1) elite Swedish football players use of coping strategies, (2) their goal orientations, and (3) the relationship between their goal orientation profiles and use of coping strategies. Participants were 83 male elite Swedish football players. The Perception of Success Questionnaire and COPE inventory were administered to meet the objectives. Results showed a significant interaction effect between athletes’ task and ego goal orientations and their use of planning. Athletes’ with a HT/LE profile (3.06 ± 0.36; M ± SD) used frequently more planning than athletes’ with a LT/LE profile (2.59 ± 0.51). Moreover, athletes’ high in task (2.71 ± 0.37) used more problem-focused strategies than athletes low in task (2.54 ± 0.33), and athletes’ low in ego (2.31 ± 0.24) used more emotion-focused strategies than athletes’ high in ego (2.17 ± 0.27). Results were discussed in relation to previous research of achievement motivation and athletes’ use of coping strategies.

Rimmer (2011) investigated to assess the relationship between athlete motivation and the coping strategies used to deal with stress during their sporting performance, as well as the relationship between motivation and affect, and coping
and affect. One hundred and forty five university athletes completed the questionnaires. Regressions revealed that two of the three self determined levels of motivation, identified and integrated regulation, predicted increased task-oriented coping strategies. Two of the three non-self determined levels of motivation, amotivation and external regulation, significantly predicted disengagement-oriented coping. Additionally, intrinsic motivation and task-oriented coping predicted increase positive affect. Increased disengagement-oriented coping predicted decreased positive affect. Disengagement-oriented coping significantly predicted increased negative affect. These findings add to the understanding of motivations role in predicting athletes coping.

Levy, Nicholls, and Polman (2011) investigated the relationship between confidence and subjective performance in addition to exploring whether coping mediated this relationship. A sample of 414 athletes completed a measure of confidence before performance. Athletes also completed a measure of coping and subjective performance after competing. Correlational findings revealed that confidence was positively and significantly associated with subjective performance. Furthermore, mediational analysis found that coping partly mediated this relationship. In particular, task-orientated coping (i.e., mental imagery) and disengagement-orientated coping (i.e., resignation) had positive and negative mediational effects, respectively. Additionally, athletes who employed mental imagery generally coped more effectively than those using resignation. These findings imply mental imagery has the potential not only to improve confidence, but also subsequent performance,
while resignation coping may have the opposite effect. Overall, these results lend some credence to Vealey’s integrated sports confidence model.

Allen, Greenlees, and Jones (2011) in their study, explored the main and interactive effects of the big five personality dimensions on sport-related coping and compared personality profiles of discrete groups of athletes. Altogether, 253 athletes (mean age 21.1 years) completed the NEO-FFI (Costa & McCrae, 1992), and the Coping Function Questionnaire for Sport (Kowalski & Crocker, 2001). Results showed that extroverted athletes, who were also emotionally stable and open to new experiences (a three-way interaction effect), reported a greater use of problem-focused coping strategies. Conscientious athletes (main effect), and athletes displaying high levels of extraversion, openness, and agreeableness (a three-way interaction effect), reported a greater use of emotion-focused coping strategies, and athletes with low levels of openness, or high levels of neuroticism (main effects), reported a greater use of avoidance coping strategies. Different personality characteristics were observed between higher-level and lower-level athletes, between men and women athletes, and between individual and team sport athletes. These findings suggest that the five-factor model of personality can help distinguish various levels of athletic involvement and can help identify the coping strategies athletes are likely to adopt during participation.

Abedalhafiz; Altahayneh, and Al-Haliq, (2010) explored the sources of stress and use of coping styles among Jordanian athletes. Fifty-six student-athletes from a university in Jordan participated in this study and completed a survey to examine their stress sources and associated coping styles. The results indicated that the most common sources of stress were injury and illness, pressures of competition, referee,
conflict with the coach, and spectators. Athletes identified 16 coping strategies used to manage stress. Results suggest that interventions designed to reduce stress should seek to increase the use of avoidance and approach styles to cope with stress.

Parnabas, Mahamood and Ampofo-Boateng (2010) sought to explore potential positive coping techniques used by athletes as influence by demographic variables of athletes. The sample consisted of 918 Malaysian athletes. The sample was drawn from athletes who competed in MASUM (Sport between Universities), MSSM (Sport between Schools) and Sukan Olimpik Muda (Young Olympic Athletes Sport). Results showed that positive self-talk have the highest usage among athletes. National athletes used more positive coping techniques than state, district, university and school level athletes. Positive coping techniques of high level performance athletes were more than medium and low level performance athletes. The findings emphasized the importance of positive coping strategies to enhance performance. Sport psychologists, sport counselors and coaches should encourage their athletes to use positive coping strategies to improve performance.

The purpose of the investigation by Kristiansen and Roberts (2010) was to examine how the Norwegian Olympic Youth Team (N=29) experienced competitive and organizational stress during the European Youth Olympic Festival in July 2007 and how they coped with the stressors. Participants were aged 14–17 and competed in handball, track and field, swimming, and judo. We used a qualitative methodology with interviews and open-ended questionnaires. Qualitative content analyses revealed that the athletes experienced competitive stressors because of the size and importance of the competition, and organizational stressors (e.g., housing, lining up for food, and
transportation) exacerbated by the extreme heat during the Festival. The elite competitive experience was novel to all and overwhelming for some of the more “inexperienced” athletes. The athletes used cognitive coping strategies to some extent in addition to relying on different types of social support. The findings revealed the need for social support for adolescent athletes, and underlined the importance of a good coach–athlete relationship in order to perform well and enjoy the competitive experience.

Anshel; Sutarso, and Jubenville (2009) examined racial and gender differences on sport-related sources of acute stress that competitive athletes perceived as highly intense and experienced during the competitive event. Athletes \((N = 332, 176 \text{ men, } 156 \text{ women}; 59 \text{ African Americans: } 27 \text{ men, } 32 \text{ women}; 232 \text{ Caucasians: } 125 \text{ men, } 107 \text{ women}; \text{ and } 41 \text{ Hispanics: } 24 \text{ men, } 17 \text{ women})\) who competed in sport on a high school or college team participated in this study. The sources of the acute stress and the coping style in sport scales, which M. H. Anshel and T. Sutarso (2007) developed, required the athletes to indicate their perceived stress intensity and their "typical" coping responses after experiencing the two stressors they perceived as most intense. A multivariate analysis of variance indicated that Caucasians experienced higher stress intensity more often than did African Americans on each of two sources of acute stress, and Caucasians tended to use an approach-behavior coping style. Women reported higher stress intensity for coach-related sources of acute stress and used approach-behavioral and avoidance-cognitive coping styles more often than did their male counterparts. Hispanic athletes did not differ from other groups on any
measure. The authors conclude that race and gender influence the coping process in competitive sport.

Gan, Anshel and Kim (2009) investigated to determine the extent to which sources of stressful events and cognitive appraisal of those events predict coping style and to determine differences in coping style between 138 \((ns = 74\) females and 64 males) Chinese college athletes at the elite level and 253 \((ns = 60\) females and 193 males) non-elite athletes who had competed on their high school sports team, and currently engage in recreational (intramural) sports as college students. Two five point Likert-type inventories were developed for this study, the Sources of Acute Stress in Sport Inventory (SASSI) and the Coping Style in Sport Inventory (CSSI). The Stress Appraisal Measure (SAM; Peacock & Wong, 1990), a validated measure used extensively in the non-sport literature, identified the athletes’ cognitive appraisals. Results of a discriminant analysis indicated that three stress sources, verbal-abuse-by-others, coach-dissatisfaction, and environmental-sources, and two cognitive appraisals, control-by-self and control-by-others, were significant predictors for athletes’ coping styles. It was concluded that coping style is a function of the type of stressor and cognitive appraisal and that an athlete's coping style differs as a function of skill level and gender.

Bognar, Geczi, Vincze and Szabo (2009) studied to compare coping skills, motivational profiles, and perceived motivational climate in elite U18 male ice hockey \((n=20)\) and soccer \((n=23)\) players \((n=14)\). The instruments used were the Perceived Motivational Climate in Sport Questionnaire -2, the Sport Motivation Survey, and the Athletic Coping Skills Inventory -28. The questionnaires-based data revealed that both
players could be considered task oriented, exhibiting high levels of confidence, achievement motivation, concentration, and intrinsic motivation. The results also revealed that in contrast to ice-hockey players, soccer players demonstrated higher levels of important role perception, freedom from worry, and coachability, as well as more task orientation than ice-hockey players. However, ice hockey players demonstrated significantly higher perception of unequal recognition than soccer players. Consequently, coaches in different talent development programs need to emphasize the individuality and quality, effort as related to success, aid in providing clear goals, and present optimal challenge in harmony with the players’ competence.

Geczi et al (2009) suited the psychological profile of Hungarian Young Ice hockey players. The aims of this study were to identify those psychological background factors for three age groups of the national ice hockey teams (U16, U18, U20) that are of the most importance. It was also the purpose of this study to determine the age-related psychological differences which may play a long-term role in the ice hockey players’ careers. Altogether 95 elite male ice hockey players filled out CSAI-2, ACSI-28, STPI-Y self-evaluation questionnaires. ANOVA showed no differences among the age groups with the exception of the trait anger scale results.

Omar-Fauzee 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 included 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. 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 coachability (M=1.5519, SD=.4361). From the results, there were significant differences in one subscales of ACSI-28 coping with adversity between male and female. 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 showed significant differences with level of participations in this study.

Kima; Jangb, and Yook, (2008) investigated to; (i) figure out the acute stressors/coping strategy during practice and competition of Korean national fencing players, (ii) modify their coping strategy, making it fit their needs, and (iii) examine the training effects of this modified coping strategy on their performance enhancement. In order to explore their acute stressors and coping strategies, in-depth interviews were administered five times to the eleven Korean national fencers (6 males in sabre, 5 females in epee) who had been preparing for 2006 Doha Asian Games in Taeneung National Training Center. After their acute stressors and coping strategies were grasped, the original coping strategy was modified into a better one to cope with their stressors. Additionally, one educational session was provided to the subjects to ensure that the mechanism of the coping strategy was effective. And interviews were provided five times to each fencer to monitor whether this modified coping strategy influenced their cognition. They were trained in this modified coping
strategy for two months. To examine the effects of the modified coping strategy training, ACSI-28 and CSAI-2 were administered before and after the experiment, and differences were compared. Qualitative methodology was used to inductively analyze the interview transcripts, and paired t-tests were used to see the effects. Results revealed that acute stressors consist of; 1) five dimensions, including the 'sparring partner' during practice, and three dimensions such as 'the attitude of the opponent' during competition, 2) the intensity of the stress was different based upon the stressor, 3) the avoidance coping strategy was used more than approach coping strategy both in practice and competition situations, 4) after the training, most fencers used approach coping strategy than avoidance coping during practice, but avoidance coping was still predominantly used during competition. This shows that the fencers used coping strategy differently based upon time availability to extract the desirable result, the capability to control the situation, the coping style, and the appropriateness of the situation. Quality training was the most effective dimension during practice in the modified coping strategy, followed by arousal control and concentration. During competition, anxiety control, concentration, and self-confidence were effective in order.

Bjorkly (2007) examined the effects of a ten-month team-based mental coping programme in 2004, on players' perception of changes in (1) time spent reading about sport psychology; (2) pre-match preparations (engagement and dis-engagement); (3) the individual player's coping style during matches when his performance is below expectations; (4) how each player would solve hypothetical match-related problems; (5) how each player would help a teammate with the same problems, and (6) aspects
of the team’s collective efficacy by comparing the type of advice concerning match-specific performance problems that the individual player would give to himself and to a teammate. A comparison of pre- and post-service delivery scores of 21 male professional soccer players from a team playing in the Premiere League in Norway, showed a significant increase in the amount of sport psychology literature read, the use of specific coping skills during matches, and the offering of more specialized help to teammates after the intervention. In conclusion, the participants reported improvements in the application of mental coping strategies.

O’Neil and Steyn (2007) studied to determine the coping strategies that non-elite athletes use to overcome environmental factors during endurance events. A sample of 53 non-elite endurance athletes completed a questionnaire and interviews were conducted. The research focused on exploring individual experiences as well as identifying themes and patterns of behaviour during endurance events. The results indicated that endurance athletes used basically three coping strategies (responses) that were identified in the literature. The most frequently used strategy was to remove the source of the stress followed by strategies that change the athlete’s perception of the stressor and lastly strategies that deal with the symptoms of the stressor. Most of the endurance athletes perceive problems and challenges to be a positive experience. The majority of endurance athletes have a positive perception of their own abilities and regularly place themselves in situations of danger or extreme stress to test this ability. This ability must, however, constantly be tested by participation in endurance sport or other stressful situations. Previous successful participation in endurance events or
other stressful situations leads to an increase in positive self-perception of own abilities, as well as an increase in performance in endurance events.

Hatzigeorgiadis, and Chroni (2007) explored the relationships between pre-competition anxiety and in-competition coping in swimmers. Thirty nine male swimmers with international competitive experience participated in the study (mean age 19.72 years; mean competitive experience 9.36 years). Participants completed a short measure of anxiety intensity and direction before the start of their event and a coping questionnaire after the completion of their event. Correlation analysis showed that intensity of cognitive anxiety had low to moderate negative correlations with approach coping strategies, and low to moderate positive relationships with avoidance coping strategies. Furthermore, somatic anxiety intensity had low to moderate positive relationships with avoidance strategies. Finally, analysis of variance revealed that swimmers perceiving their anxiety states as facilitative reported more approach and less avoidance coping strategies than swimmers perceiving their anxiety states as debilitative. In accordance with previous evidence from the sport anxiety literature the results suggest that facilitative perceptions of anxiety symptoms relate to more adaptive cognitive and behavioural outcomes. Coaches should therefore place emphasis on not only the regulation of anxiety intensity, but also the way swimmers perceive anxiety symptoms.

Anshel and Sutarso (2007) conducted a study, the objectives of which were to determine athletes’ sources of acute stress (SAS) perceived as highly intense and experienced during the competitive event, their respective coping styles (CS) for two different (highly intense) stress sources (SAS), the relationship between the acute
stressors and their CS (approach and avoidance coping in cognitive and behavioral forms), and the generalizability of the SAS and the CS scales as a function of gender. Athletes (N=332, 176 males and 156 females, $M_{age}=21.6$ years) who were former or current sports competitors for their high school or college team completed a two-part inventory generated for this study. The athletes were asked to indicate their perceived stress intensity for common SAS's (part 1) and the manner in which they typically coped with two of the stressors perceived as the most intense (part 2). Theory-driven categories of acute stress sources were labelled “performance-related” and “coach-related,” and CS's were grouped as “approach-behavioral,” “approach-cognitive,” and “avoidance-cognitive.” Intra-reliability (Cronbach alphas) for the stressor and coping style items were .81 and .82, respectively. General CS was significantly related to general sources of acute stress ($p<.0001$). Structural equation models indicated that the athletes’ coping styles were positively related to their respective acute stressors category. The coping stress style three-factor model showed a good fit with the data. The results of the analyses indicated valid and reliable relationships between CS and SAS among the athletes. The results indicated that athletes who experienced intense coach-related acute stress were more likely to use primarily an approach-behavior CS followed by the other CS. Finally, the athlete's gender was a mediating variable in determining CS in response to selected sources of stress. Structural equation model techniques showed that athletes who experienced acute stress used their respective CS consistently. The CS three-factor model showed a good fit with the data. In addition, gender mediates the relationship between source of stress and subsequent use of CS. Future studies in this area are needed to determine whether situational characteristics
within sports contests influence the athletes’ coping responses, an additional test of
trait and contextual coping theory.

Spieler (2007) studied to predict factors contributing to athletic success among
football players. Participants were 108 male football players (35 linemen, 18 tight
ends/linebackers, 47 skill players, 8 special teams) from 6 teams in a NCAA Division
I Southeastern conference. Using multivariate analysis of variance and discriminant
analysis, the current research attempted to determine factors from demographic
information, the Ten-Item Personality Inventory, and the Athletic Coping Skills
Inventory-28, that most accurately predicts starting status in United States collegiate
football players. Results showed that there was a significant difference between
starters and non-starters for age, high school size, and coping with adversity, that
predicted starting status 79.6% of the time.

The purpose of this study by Jenkins (2005) was to examine female college
athletes' relationships as they related to perceived stress, coping responses, and athlete
satisfaction. Relational health, which was defined according to the constructs of
growth-fostering relationships as the core of women’s self-esteem and identity, was
examined as a potential mediator of perceived stress on athlete satisfaction. The
sample was drawn from 197 degree-seeking female undergraduate athletes who
participated on one or more varsity athletic teams at a large southeastern university
and Division I athletic institution during the 2004-2005 academic year. A total of 103
female college athletes across seven different sports completed the Relational Health
Indices (RHI), the Perceived Stress Scale (PSS10), the Coping Checklist for Sport
(CCS), and the Athlete Satisfaction Questionnaire (ASQ). Data were analyzed using
regression analyses, and the results indicated that relational health with members in the athletic community and head coaches was associated significantly with total athlete satisfaction across all 15 subscales. Furthermore, a significant, inverted relationship between perceived stress and relational health was found among the female college athletes who participated in this study. Although there was not a significant relationship between relational health and coping style (i.e., engagement and disengagement coping) at the $p < .05$ level, engagement coping was positively associated with athlete satisfaction. In conclusion, relational health significantly mediated the relationship between perceived stress and athlete satisfaction. The implications of these findings for theory, practice, and research are discussed along with recommendations for future research.

Hamstra; Burke; Joyner and Hardy (2004) employed a single-subject/qualitative design to determine if psychological skills training (PST) programs influenced athletes’ levels and interpretations of anxiety, concentration, motivation, and coping resources. Two female collegiate swimmers high in anxiety and low in motivation and coping skills were selected from a participant pool of 53 swimmers, divers, volleyball, and soccer players. Both athletes completed an inventory packet consisting of a modified version of the Sport Anxiety Scale (SAS), Sport Motivation Scale (SMS), and the Athletic Coping Skills Inventory-28 (ACSI-28) as well as an interview before and after an eight-week personalized PST program. Overall, the findings in this study were positive and indicated benefits from the PST program. Results indicated positive changes in both participants. Both had a reduction in total
anxiety levels and an increase in total personal coping resources. Results are discussed in terms of overall strengths, weaknesses, and recommendations for future research.

Waples (2003) studied to discover the different psychological characteristics associated with elite level gymnasts, and contrast the results with psychological characteristics of competitive gymnasts of other levels using the Athletic Coping Skills Inventory-28. Participants in this study were 195 gymnasts from gymnastics training centers throughout the United States. Results indicated that there was a significant difference in the Personal Resources Score (PCR) between the elite gymnast and all other levels. Furthermore, a significant difference was demonstrated among four of the seven subscales making up the Athletic Coping Skills Inventory-28. The study supports the hypothesis that the psychological make-up of “elite” level gymnasts is different than that of other competitive gymnastics levels.

Anshel and Anderson (2002) investigated to test the extent to which highly skilled table tennis players used coping strategies that were consistent with their coping style, both of which were categorized as approach and avoidance, in response to performance-related sources of acute stress on a table tennis task. Competitive Australian male table tennis competitors (N = 36), ages 19 to 35 years, attempted to strike a table tennis ball projected automatically by a machine from across the table. The primary results indicated significant correlations between the athletes' approach and avoidance coping styles and their respective use of coping strategies (p <0.001) and that approach coping strategy was markedly related to increased negative affect (p <0.001). An approach coping style was a significant predictor of performance on the first block of 20 trials, whereas a combination of positive affect, avoidance coping
strategies, and negative affect best predicted performance on the second block of 30 trials. The results suggested that approach and avoidance coping appears to be a valid conceptual framework for future study of the coping process in sport.

Shaw (2001) investigated to evaluate the psychometric properties of both the ACSI – 28 and the SMS in assessing psychological skills and motivation in independent samples of senior athletes competing in the West Virginia Senior Sports Classic held from June 15-18, 2000 in Charleston, West Virginia and the Florida Senior State Championships held in Kissimmee, FL from November 28 – December 3, 2000. Results of the data analysis revealed significant differences across age groups for amotivation as well as differences in psychological skills across gender and qualification status. Results of psychometric testing on the ACSI – 28 and the SMS did not support the construct validity of these instruments in assessing psychological skills and motivational type in the senior athletic population. Information from this study serves as a baseline for future studies, which can build upon examining the constructs of motivation and psychological skill among senior athletes. Information may be used to educate future senior game participants who compete on a variety of levels on how to incorporate psychological skill, recognize and improve motivational strategies, in order to increase the likelihood of achieving successful performances.

The purpose of this study by Anshel, Jamieson, and Shula (2001) was to describe the manner in which skilled athletes interpreted and coped with various sources of acute stress experienced during sport competition. For each of eight sources of acute stress, male (n = 174) and female (n = 77) Israeli athletes were asked to assess the extent of using 12 different cognitive appraisals, based on Lazarus and Folkman's
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(1984) appraisal model. The appraisals were compared to the athletes' subsequent use of coping strategies, using the approach and avoidance coping framework (Roth & Cohen, 1986). Repeated measures ANOVA compared the appraisal categories of harm/loss, threat, challenge, and the coping categories of approach and avoidance across eight stressors, with gender as a between-participant factor. There was a significant appraisal by stressor interaction (p < .001), with significant main effects for stressor and appraisal and a significant interaction between appraisal category and gender (p < .02). Females experienced more threat and fewer harm or challenge appraisals than males. A 12 (appraisal items) x 2 (gender) x 8 (stressors) repeated measures MANOVA revealed a significant main effect of appraisal item (p < .001), and a significant appraisal item by stressor interaction (p < .001). In addition, approach coping strategies were significantly related to each of the three appraisal categories of harm, threat, and challenge. However, correlations between categories of appraisal and coping for each source of stress indicated that these relationships differed as a function of the source of stress. The results of this study confirmed that cognitive appraisals of stressful events influence subsequent use of coping strategies. Additional quantitative and qualitative research is needed to understand the underlying personal and situational factors that influence appraisals and coping in competitive sport, and the development of validated inventories that measure these constructs.

Anshel, and Kaissidis (1997) examined links between coping style, situational appraisals and the subsequent use of coping strategies in response to acute stress among competitive Australian basketball players (N = 190, 93 men and 97 women,
ranging in age from 18 to 44 years). Regression analysis indicated that participants' approach and avoidance coping responses varied across four sport-related stressful situations. In addition, both personal and situational factors accounted for significant variation in players' approach coping responses, with situational factors better predictors of approach coping than personal dispositions. For avoidance coping, situational appraisals (i.e. perceived stress and controllability) were again better predictors than personal dispositions. The results lend credence to the interactional (contextual) model of coping in which participants' use of coping strategies is at least a partial function of situational demands.

Mahoney and Avener (1997) reports on an exploratory study on the psychology of elite athlete. Thirteen male gymnasts were given a standard questionnaire and interviewed during the final trials for the U.S. Olympic team. Particular attention was given to psychological factors and cognitive strategies in their training and competition. Using their final competitive grouping as the primary dependent variable, correlations were performed to assess the relationship between these factors and superior athletic performance. Data from this exploratory study suggested that varying patterns of cognition may be strongly correlated with successful and superior gymnastic performance. Specifically, dream frequency, self-verbalizations, and certain forms of mental imagery seemed to differentiate the best gymnasts from those who failed to make the Olympic team. These two groups also appeared to show different anxiety patterns and different methods of coping with competitive stress. The implications of these results for sport psychology are briefly discussed.
Anshel (1996) explored the use of approach and avoidance coping styles and task-focused and emotion-focused coping strategies in competitive sport. Four hundred twenty-one adolescent males from New South Wales, Australia, who were currently competing in team sports indicated their usual responses to each of 8 acute stressors commonly experienced in sport, using a 128-item inventory. The reliability coefficient (Cronbach's α) for each stressor ranged from .81 to .92. Twenty-six of the original 128 items on the inventory were retained, on the basis of factor analysis. Correlations between stressors indicated that coping styles were a function of type of stressor, providing support for the transactional model. Goodness of fit was high (.87). The present results partially support the construct of coping style among adolescent-aged sports competitors.

2.2 Studies related to Self Concept among Athletes

Daroglou (2012) investigated to examine the way that gymnastic performance can be discriminated based on psychological skills and self-efficacy. The sample of the study was 101 gymnasts (Mage = 11.8 ± .74 years, 22 male and 79 female), who competed at the Hellenic Championship of Rhythmic Gymnastics and the Hellenic Championship of Artistic Gymnastics. Each completed a Self-efficacy scale one day prior to the competition and the Athletic Coping Skill Inventory – 28 immediately following the event. All subscales of the ACSI-28 showed adequate internal consistency (α>.64). A discriminant function analysis suggested that the predictors for distinguishing between poor and high level performance were: Coping with adversity (F=9.3, p<.01); Goal Setting/mental preparation (F=8.58, p<.005); Confidence (F=8.81, p<.005); Freedom from Worry (F=4.83, p<.05); Coachability (F=6.81,
p<.01); and Self-efficacy (F=18.9, p<.001). The results indicated that best performance was achieved by those gymnasts who believed they could relax and compete with enthusiasm and certainty, set goals and prepare themselves for the competition, did not worry excessively about their performance, and showed confidence they could perform at a high level. According to the findings of this study, ability alone must not be the only concern of coaches. They also need to enhance certain psychological skills of their gymnasts at an early age, in order for them to have successful outcomes in a competition. More specifically, gymnasts need to learn how to cope with adversity and free themselves from worry, how to use goal setting techniques and prepare themselves for the competition, and how to improve their self-efficacy and confidence.

Lars (2011) in his study explored personality dimensions, as measured by the Junior Temperament and Character Inventory, passion, self-esteem, and well-being among junior elite athletes. In addition, the athletes were compared with non-athletic peers to investigate if they had a personality profile which appears to be more beneficial for athletes. Female athletes scored significantly higher on the personality dimensions Reward Dependence and Cooperativeness, and significantly lower on Self-esteem than their male counterparts. Both obsessive and harmonious passion was found to be more pronounced among those competing at an international level as compared with athletes competing at a local level. In addition, the athlete sample scored significantly higher on Persistence and Self-Directedness and lower on Harm Avoidance than non-athletes. The use of the J-TCI as a measure of personality yielded interesting results, which should be relevant for the sport psychology community and
increase our understanding of the underlying factors and mechanisms of elite sport. In future research, the predictive power of personality on especially performance in different sports should be investigated.

Muthu, Jayanthi and Sakthigananavel (2011) conducted a study in Tamil Nadu state, India with the objective of studying self-esteem of women sports participant in different games. Exploratory research design was adopted for the study. The total sample comprised of 90 playing women in which 30 were Kho - Kho / Kabaddi players, 30 were Badminton / Ball Badminton / Volley Ball players and 30 were Squash Rackets / Table Tennis / Fencing / Tennis players. Self esteem scale developed by Verma and Kapadia was used to collect the data. The investigators personally met the respondents by going to their place and administered the tests and collected the data. Among all the three categories of women sports participants, the Squash Rackets / Table Tennis / Fencing / Tennis were having high level of self esteem followed by Badminton / Ball Badminton and Kho - Kho /Kabaddi players. Collectively as one group, most of them were having high and medium level of self esteem reflecting that sports performance of women promotes esteem of women. Through correlation it was found that education and playing experience were significantly and positively related to self esteem of women sports participants. Hence women with higher education and higher playing experience had higher self esteem.

Shannon (2011) examined physical self-concept, global self-esteem, and athletic identity among former collegiate athletes. 308 former Division 1 NCAA collegiate athletes participated in the study. This study replicated findings that physical self-worth demonstrates a positive relation with global self-esteem. Athletic
identity was shown to mediate the relation between physical self-concept and global self-esteem for former collegiate athletes. Athletic identity was also shown to mediate the relation between physical activity and physical self-concept. Athletic identity did not serve as a moderating variable for the entire sample, but was shown to moderate the relation between physical activity and physical self-concept for those no longer participating in their collegiate sport and those no longer identifying as an athlete. Athletic identity and global self-esteem demonstrated age-related differences. These findings suggest that there is some maintenance of athletic identity for many former collegiate athletes, and that identity remains influential in its association with physical self-concept.

Scarpa (2011) investigated the role of physical activity and sports participation on physical self-concept and self-esteem in adolescents and young adults with and without physical disability. The participants were 1149 individuals aged between 13 and 28 (578 boys and 571 girls). They were divided into four groups: (A) without disability who practised sport (n = 742), (B) without disability who did not practise sport (n = 264), (C) physical disabled who practised sport (n = 109), (D) physical disabled who did not practise sport (n = 34). The participants completed the Physical Self-Description Questionnaire (PSDQ; Marsh, Richards, Johnson, Roche, & Tremayne, 1994) in a cross-sectional design. The results highlighted that individuals with physical disability who practised sport obtained similar results to the people without disability who practised sport in a ten of the eleven PSDQ scales. Finally it seems possible to assert that persons with physical disability who practise sport present a positive physical self-concept and good self-esteem.
Shapiro and Martin (2010) investigated to predict reported PA (physical activity) behavior and self-esteem using a multidimensional physical self-concept model and to describe perceptions of multidimensional physical self-concept (e.g., strength, endurance, sport competence) among athletes with physical disabilities. Athletes (N = 36) completed the Physical Self-Description Questionnaire. Participants reported mostly positive perceptions of self-esteem, global physical self-concept, endurance, body fat, sport competence, strength, flexibility, and physical activity. Correlations indicated a number of significant relationships among self-esteem and reported PA and various dimensions of physical self-concept. Using physical self-concept, strength, endurance, and flexibility in the first regression equation and sport competence and endurance simultaneously in the second equation, 47 and 31% of the variance was accounted for in self-esteem and reported PA, respectively. The findings support the value of examining multidimensional physical self-concept as different aspects of the physical self appear to have different influences on reported PA engagement versus self-esteem.

Milavic, Guč; and Miletic (2010) conducted a study on a sample of 118 female and 104 male primary school students aged 13±1.2 years, with the aim of determining the relation among different types of motivation in sport compared to the perceived sport competence. To determine the type of motivation in sport, a questionnaire Task and Ego Orientation Sport Questionnaire (TEOSQ) was used. With the aim of determining the structure and measure of the Perceived Sport Competence (PSC) a new instrument of measure was constructed according to the Physical Self-Description Questionnaire (PSDQ) by Marsh. According to the analysis of the results,
an important difference between female and male students was not statistically determined neither according to the level of orientation of motivation in sport nor in the assessment of competence on the General PSC scale. A statically important difference in the results of the Specific PSC scale was found in which male pupils have considerably higher results than female pupils. An additional analysis showed how the cluster of medium task/low ego orientation considerably differed from the two clusters of those questioned (clusters of medium task/high ego and high task/high ego). The construction of the two scales of perceived sport competence with high quality metrical characteristics, and the differentiation of male and female students by the Specific PSC enabled both a scientific and practical application in the analysis of motivation in sport in the sample of school aged children.

Graham (2010) examined the relationship among physical activity, academic performance and self esteem. In this study, fifty-nine sixth-grade students completed the physical activity questionnaire for older children (PAQ-C), and the physical self-description questionnaire (PSDQ). Parents of the students added information about their child’s academic grades in math, science, and language arts in order to calculate grade point average (GPA). Separate Pearson’s correlations revealed a significant relationship between physical activity and academic performance (r=.585); physical activity and self-esteem (r=.426); and academic performance and self-esteem (r=.624). The results provide strong support for regular physical activity.

The purpose of this study conducted by Nicholls, Jones, Polman, and Borkoles (2009) was to examine acute sport-related stressors, coping, and emotion among a sample of professional rugby union players during training and matches. Five
professional rugby union players maintained diaries for 31 days. The diaries consisted of a stressor checklist and an open-ended stressor response section, an open-ended coping response section, a Likert-type evaluation of coping effectiveness, a best-of-fit emotional response section, and a Likert-type evaluation of emotional intensity. Six out of the 10 stressors reported had a higher mean frequency in training compared with matches. Blocking was the most frequently cited coping strategy on match days, whereas increased concentration was the most frequently cited coping strategy on training days. Coping effectiveness was significantly higher during training compared with matches. Higher levels of emotional intensity were significantly associated with lower levels of coping effectiveness. Significant individual differences were found for both coping effectiveness and emotional intensity.

Rathee (2009) conducted a study for evaluation of self perception among sportspersons and non-sportspersons. 185 female college students of Chandigarh (95 sportspersons and 90 non-sportspersons) were selected as subjects. The subjects were administered Semantic Differential Scale and obtained data was statistically analyzed for all 10 components of the variable self perception as well as for overall self perception. The results indicated that sportspersons were significantly better than non-sportspersons on overall self perception and its three components.

Guerieri (2009) conducted a study, the purpose of which were to: (a) examine the prevalence of overweight and obesity and the percentage of adolescent females from a rural community that meets physical activity recommendations; (b) examine the relationship of body composition, physical activity, and sedentary behavior on academic performance; and (c) examine the relationship between physical activity and
physical self-concept among adolescent females. Thirty adolescent females (mean age = 15.6 ± 1.3 years) wore an Actigraph GT1M accelerometer for seven consecutive days, set to measure in 15-second epochs. Age specific cutpoints were used to determine minutes of sedentary behavior and light, moderate, vigorous, and moderate-to-vigorous physical activity (MVPA). Participants completed the Physical Self-Description Questionnaire (PSDQ) to assess how they perceive themselves physically. Height, weight, and percent body fat were measured. Grade point averages (GPA) were obtained from school records. Regression analysis was performed to predict GPA from measures of body composition, sedentary behavior, and MVPA. Measures of physical activity and sedentary behavior were correlated with PSDQ subscale scores with Pearson correlations. Thirty percent of participants were obese and another 36% were overweight. None of the participants accumulated ≥ 60 minutes of MVPA per day. Together measures of body composition, physical activity, and sedentary behavior explained 36% of the variance (multiple $R = .60$) in GPA. The standard error of estimate for predicting GPA was 0.64. Minutes per day spent in light physical activity was negatively correlated ($p < .01$) with the Self-Esteem ($r = -.51$), Body Fat ($r = -.52$), and Global Physical Self-Concept ($r = -.48$) subscales of the PSDQ. Only the Physical Activity subscale of the PSDQ was significantly correlated with MVPA ($r = .36$). In conclusion, the current sample of adolescent females had a high prevalence of overweight and obesity and was physically inactive. Academic performance was significantly associated with measures of body composition, physical activity, and sedentary behavior. Time spent in light physical activity was associated with lower self-perceptions of body fat, global physical self-concept, and
self-esteem. Measures of higher intensity physical activity were generally not associated with physical self-perception measures, possibly due to the low amount of time spent in MVPA. Interventions to increase physical activity and improve body composition in adolescent girls should be considered not only for their health effects, but also for their potential to impact academic performance and psychological profiles.

Medisauskaite, Blahutkova, Laskienė, and Sebera (2009) studied the intention of which was to look for the relationship between gender and age in self-esteem in adolescent basketball players. Our study sample consisted of 95 adolescent basketball players (54 males and 41 females) from different sport secondary schools and clubs in Prague and Brno (Czech Republic). The respondents were divided into two age groups (13 to 15-year-olds in the first, 16 to 18-year-olds in the second). Self-esteem was assessed by the Physical Self Description Questionnaire (PSDQ, Marsh 1994). To analyze the interaction effects for each factor of the physical self-concept (gender and age involvement), MANOVA (Multivariate Analysis of Variance) and correlation was calculated. The significance level was chosen to be 10%. The differences in evaluation of self-esteem were revealed by age. Self-esteem was found to be more positive in younger adolescent basketball players than in older players regardless of gender (p<0.1).

Omar-Fauzee and Muraleedharan (2006) examined the extent to which involvement in sporting activities improves the self-esteem of young athletes. Further, it investigates the impact participation has on different aspects of the self. Eight athletes from Bukit Jalil Sports School and six undergraduate athletes from the Universiti Putra Malaysia (UPM) volunteered for the study. Drawing on the
hermeneutic philosophy of Ricoeur, the researchers developed a methodological approach that requested the participants to narrate how their involvement in sports had enhanced their self-esteem. The narrative texts were content analyzed and the results obtained showed that participation in sports had impacted positively in the enhancement of self-esteem in a number of key ways. The findings show that a high value is attached to a range of competencies related to social acceptance, educational health attainment, success in sport and issues pertaining to physicality. It was suggested that further research involving longitudinal designs based on large representative samples is needed to investigate attitude changes in more depth. It was also suggested for the need for a ‘sport for all’ strategy for developing a more sustainable ‘sport participation culture’ in Malaysia.

Dishman (2006) tested the factorial validity and invariance of the Physical Self-Description Questionnaire (PSDQ) among Black (n5658) and White (n5479) adolescent girls in the 12th grade. Construct validity was examined by estimating correlations between PSDQ subscales and external criteria (physical activity, physical fitness, body mass index [BMI], and participation in sports). The hypothesized 11-factor model demonstrated adequate overall fit in both groups. Comparison of nested models supported the between-group invariance of the overall factor structure. Convergent and discriminant evidence for construct validity was supported by the pattern of correlations with the external criteria. The results indicate that a meaningful comparison of PSDQ scores can be made between Black and White girls in the 12th grade and that valid inferences from PSDQ scores can be made about specific aspects of physical self-concept. Despite lower levels of physical activity, sport participation,
and fitness and higher BMI, Black girls had similar self-esteem and higher physical self-concept and perceived appearance compared to White girls.

 Moreno and Cervello (2005) analyzed the effects of gender and level of physical activity involvement on physical self-perceptions in Spanish adolescents. Participants were 2,372 Spanish students. Results showed an effect of interaction between gender (males vs. females) and physical activity practice (practice vs. non-practice), indicating that males that did sport had higher scores in Sport Competence, Attractive Body, Physical Condition and Physical Strength than females that did sport and females that did not. Females that did sport had higher scores in Sport Competence, Physical Condition and Physical Strength than females that did not do any sport. Results also showed differences between physical self-perceptions and the level of physical activity involvement. Those that participated in physical activity once a week or less had lower scores in Sport Competence, Physical Condition and Physical Strength than those that participated in physical activity more than 3 times a week. Those that participated in physical activity more than 3 times a week had higher scores in Sport Competence, Attractive Body, Physical Condition and Physical Strength than those that participated in physical activity 2 to 3 times a week.

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Huebner (2004) conducted a study on regular exercise and self-esteem with five main objectives. The first objective was to determine the prevalence of exercise among the study population, second to examine the relationship between exercise and physical self-esteem, third to examine the relationship between exercise and global self-esteem, fourth to examine the relationship between physical self-esteem, importance values, and global self-esteem, and lastly to identify important factors in this relationship. Self-administered questionnaires (Cronbach’s alpha = .86) were used to collect data from 74 administrative staff at the Faculty of Engineering, Chulalongkorn University. Results showed a low prevalence of regular exercise when using American College of Sports Medicine guidelines (10.8%). A positive significant relationship was observed between exercise intensity and physical self-esteem at $p=.020$. Significant relationships were also observed between exercise intensity and
competency self-esteem; exercise frequency and appearance self-esteem; and exercise alone status and competency self-esteem. Exercise characteristics and global self-esteem showed no significant relationships. Physical self-esteem, importance values, and global self-esteem also showed no significant relationship in a test of linear regression. Gender was the biggest determinant of exercise behavior and self-esteem scores. Males were more likely to participate in running, while females were more likely to participate in aerobics. Additionally males had higher levels of strength self-esteem than females. These findings are in partial agreement with research conducted in the west, however further research is needed in the context of Thailand. Safe areas designated for running and aerobics may increase visibility of exercise benefits, therefore increasing participation. Additionally, since the home is one of the more popular exercise locations for exercisers within this group, exercise-at home activities should be promoted by local health institutions.

Barkhoff and Heiby (2004) explored to find whether elite athletes differ in terms of self-concept, body-concept, and daily mood. Thirty-two athletes in artistic roller and figure skating participated in this study during the German National championships. Participants were German National champions, European and World champions as well as participants in the Olympic Games in Nagano (Japan) 1998 and in Salt Lake City (USA) 2002. Findings indicated that, compared to training champions, competitor types exhibited more positive self- and body-concept. Concerning mood, there were no differences among the three groups. The results have implications for both training and selection of athletes for participation in highlight sports competitions.
Chang et al (2003) in their study explored both developmentally invariant and variable predictors of life satisfaction among 115 second-graders and 74 eighth-graders from Hong Kong. In a regression model, general self-concept and ratings of parental warmth and autonomy/detachment predicted life satisfaction equally across the two age groups. However, social self-concept was a strong predictor of life satisfaction among adolescents only, whereas actual academic test scores predicted life satisfaction only among the children. Mean group differences emerged as well, with adolescents scoring significantly lower in life satisfaction and self-concept and higher in emotional detachment than children. Results are explained in relation to both development and culture.

Anne (2002) validated the Physical Self-Description Questionnaire for use in Norwegian population. The Physical self-concept description questionnaire (PSDQ) is a relatively new instrument that measures multidimensional, and hierarchical physical self-concept. One aim of the study therefore was to analyse the factor structure and internal consistency of the Norwegian version of the PSDQ. A second purpose was to test whether the Marsh’ PSDQ (Physical Self- Description Questionnaire) model provides a reliable measure of 11 dimensions of physical self-concept across gender and across an age range from 10 to 16 years. The participants in this study were 1098 children (Mean age = 12.24, SD = 1.67). Confirmatory Factor Analysis (CFA) accomplished through the method of Structural Equation Modeling (SEM) was used.

Jackson; Thomas, Marsh, and Smethurst (2001) conducted a study, the purpose of which was to examine 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.

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Hausenblas and Downs (2001) conducted a meta-analytical review of comparison of body image of athletes and non-athletes. Due to the equivocal research examining body image between athletes and non-athletes and the serious negative effects of body image disturbance a meta-analytic review of the literature was undertaken (\(N = 78\) studies, 294 effect sizes). A small effect was found which indicated that athletes had a more positive body image compared to the non-athletes. Examination of the moderator variables revealed that the magnitude of the effect size: (a) for unpublished research was larger compared to published research; (b) for comparison groups which were included within the study was smaller than for comparison groups based on normative data; (c) did not differ between the female athletes compared to the male athletes; (d) did not vary among the aesthetic, endurance, and ball game sport athletes; and (e) did not differ by age or body mass index. Possible explanations for the more positive body image of the athletes than the non-athletes were discussed.

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athletes (n=174) and non-athletes (n=174). Results suggest that those exhibiting a positive body image were more confident in school, athletic events, and general life than those with a negative body image. (RJM).

2.3 Studies relating to Social Support among Athletes

Nicholson; Hoye; and Gallant (2011) reports the findings of an exploratory study into the perceptions of social support held by elite Indigenous athletes playing in the Australian Football League. Indigenous athletes within the AFL appear to require more culturally relevant and specialized support structures than non-Indigenous athletes. The study illustrates that teammates of a similar cultural background are the most important providers of social support and that Indigenous led and implemented support structures and programs seem most likely to be successful in supporting Indigenous athletes. The study highlighted that the family and community connections held by Indigenous athletes are little understood by their non-Indigenous teammates, their clubs or the league, yet they form an essential network of social support that provides the foundation for Indigenous participation and individual success.

Tam, Floo, and Lee (2011) examined gender differences in mental health and perceived social support, relationship between parents’ income and mental health, and differences in mental health across education levels. A total of 303 students aged 16 to 26 years were recruited from Selangor, Malaysia. The Multidimensional Scale of Perceived Social Support and General Health Questionnaire were used to measure the level of perceived social support and the mental health status. Demographic data, including education level and parents’ income, were also obtained. Females perceived significantly higher levels of overall social support than males ($t = –2.7; p < 0.05$).
However, there were no significant differences in mental health status between males and females, as well as mental health status among different parental income groups, and the education levels of the subjects. A more favourable mental health status of the subjects was associated with higher parental incomes. There were gender differences for perceived social support, but not for mental health status in older adolescents and young adults. There was also a relationship between parental income and an individual’s mental health status, but mental health was not related to their education level.

Hassell, Sabiston, and Bloom (2010) in their study concurrently explored multiple dimensions of social support of nine elite female adolescent swimmers. Data were collected and analyzed using the principles of constructivist phenomenology. Results highlighted the importance of the structural, functional and perceptual social support dimensions on athletes’ experiences in elite swimming in relation to their coaches, parents and peers. Coaches were an important provider of almost every aspect of social support. Parents provided social support on a more general level, with their swimming-specific informational support being the single most unappreciated aspect of social support. Teammates provided a sense of affiliation and shared experience that was described as the most positive aspect of their swimming involvement. The current qualitative findings provide new insights in to the concurrent structural, functional and perceptual dimensions of social support in female youth elite sport. Interpersonal relationships in the family are important to individuals, especially college students. A subgroup within the larger population of college students that calls for further examination is ethnic minority college student-athletes. The study by
Thompson (2010) examined ethnic minority college student-athletes’ perceptions of social support they receive from their family as they attend a Predominantly White Institution (PWI). Findings indicated that student-athletes perceived various types of social support that they found beneficial to them both as student-athletes in general and as minority student-athletes in particular. Types of social support included emotional support, informational support, tangible assistance support, task appreciation support, and esteem support. Participants also offered advice to families for providing social support to student-athletes while in college. Practical applications of the findings, along with directions for future research are also discussed.

Yang (2010) examined the pre-injury and post injury social support patterns among male and female collegiate athletes. The subjects were a total of 256 National Collegiate Athletic Association Division I male and female collegiate athletes aged 18 or older from 13 sports teams. Injury incidence was identified using the Sports Injury Monitoring System. Social support was measured using the 6-item Social Support Questionnaire. Data on pre-injury and post-injury social support patterns were compared. Male athletes reported more sources of social support than female athletes, whereas female athletes had greater satisfaction with the support they received. Athletes' social support patterns changed after they became injured. Injured athletes reported relying more on coaches, athletic trainers, and physicians for social support after they became injured.

Athletes also reported greater post injury satisfaction with social support received from friends, coaches, athletic trainers, and physicians. The findings identify
an urgent need to better define the psychosocial needs of injured athletes and also strongly suggest that athletic trainers have a critical role in meeting these needs.

Timothy et al (2007) reports from a larger project overviews the sources and types of social support resourced by 10 major junior athletes while they performed out of one physically removed Canadian region. Retrospective interviews and content analysis were conducted during three stages (3, 3, and 4 respondents). The data were segmented into meaning units, coded into a hierarchy of themes, and verified by each respondent and an expert panel (former athlete, coach, parent of former athlete). The respondents sought out three types of social support from four different sources (providers) that were adapted to their remote location, including teachers and general community support. Implications are considered in terms of applied research and practice with aspiring adolescent athletes located in removed locations.

Courtney (2006) reports on physiological response to injury and social support of athletes. Sports injury can be traumatic for many athletes because it is an important component of their self-identity. In addition to the physical pain of an injury, athletes struggle psychologically, however little is known about their emotional response, recovery, and need for social support. The Emotional Response of Athletes to Injury Questionnaire (ERAIQ) was adapted to collect information from athletes at an NCAA Division I university about their response to injury. Two hundred fifty varsity athletes volunteered to participate (127 males and 122 females, mean age = 19.9 years). The athletes represented 14 different teams included individuals who had experienced injuries and those who had not. Frustration and anger were the most strongly experienced emotions. Family and teammates were important sources of social support.
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during recovery. The results suggest several important implications for resources the address the emotional as well as physical rehabilitation from sports injury. Recommendations for college athletic staff are discussed and questions for future research are offered.

Schinke et al (2006) studied cultural social support for Canadian aboriginal elite athletes during their sport development. There has been a plethora of social support literature targeting elite sport. This paper adds an additional resource to the social support literature previously untouched: culture specific resources for Aboriginal populations. The sample for the present study was comprised of 23 national and international elite Canadian Aboriginal athletes (16 male, 7 female). The data were gathered through semi-structured interviews, developed, refined, and co-authored with an Aboriginal community appointed team. The results indicated that the Canadian Aboriginal elite athletes sought out support from eight different Aboriginal resources during their self-identified evolution. The role of cultural social support resources and types of assistance are discussed in relation to each development stage. Implications are considered in terms of effective cultural service provision and research.

Jowett and Timson-Katchis (2005) explored the nature of influences that parents exert on the quality of the dyadic coach-athlete relationship. A conceptual model was proposed as a guiding framework for the study. The proposed model incorporates Sprecher, Felmlee, Orbuch, and Willets’ (2002) notion of social networks and Jowett and Cockerill’s (2002) conceptualization of coach-athlete relationships. Fifteen participants from five coach-athlete parent triads were interviewed, and
content analysis revealed that athletes’ parents (a “psychologically significant” network member) provided a range of information, opportunities, and extensive emotional support, all of which influenced the quality of the coach-athlete relationship as defined by closeness, commitment, and complementarity. Results were discussed based on previous relevant research along with recommendations for future research directions and practical applications.

Cheng and Chan (2004) studied on perceived social support dimensionality with respect to age and gender differences in adolescents. The Multi-dimensional Scale of Perceived Social Support which contains three subscales—family, friends, and significant other support—was administered to 2105 high school students in Hong Kong. Confirmatory factor analyses were performed on two competing models, and the model that fit the data was a hierarchical model in which the three first-order factors were produced by a higher-order factor of overall support. Results showed that the higher-order factor was completely redundant with the first-order factor of significant other support which appeared to measure both friends and family support at the same time. The significant other subscale therefore poses serious conceptual and measurement problems. Further analysis based on the family and the friends subscales showed that girls reported more friends but less family support than boys, and older adolescents also reported less family support than younger ones. Older girls reported the highest level of friends support, and younger boys reported the highest level of family support.

Schinke and da Costa (2001) reports on the plausible relationship between support-infrastructure and major-games athletic performance. There are contextually
imbedded reasons why some major-games athletes perform with higher outcome expectations than others. Adopting Bandura's (1986) efficacy framework, this paper targets the relationship between support-infrastructure functioning and national team athletes' performances at major-games. The importance of support-infrastructure (human resource) assistance will be considered for high and low efficacy major-games athletes. This paper is intended for applied sport psychology practitioners interested in facilitating short- and long-term major-games athlete development. Recommendations are also provided for sport scientists interested in conducting field research that informs context specific interventions.

The aim of this study by Rees, Ingledew and hardy (1999) was to explore the relationships between dimensions of social support and components of performance in tennis. A post-match performance measure was completed by 144 British tournament tennis players. Principal components analysis yielded eight components, labeled Execution of (Flexible) Plan, Loss of Composure, Feeling Flat, Positive Tension, Worry, Flow, Effective Tactics and Double Faults. Before the match, 46 players had also completed the Interpersonal Support Evaluation List. Stepwise regression analyses revealed significant effects of the Belonging and Appraisal dimensions of the Interpersonal Support Evaluation List on five of the performance components. The correlations between total support and four of these performance components were also significant. Logistic regression analyses revealed no significant effects of the dimensions of the Interpersonal Support Evaluation List or Total Support upon winning versus losing. Effects of social support upon performance were therefore only apparent when attention was focused on the components of performance.
Barber, Sukhi and White (1999) investigated the effect of parent-coaches on participation motivation and competitive state anxiety. Parent-coached \((n = 36)\) and nonparent-coached \((n = 26)\) children participated in this study. These children completed a demographic questionnaire, the Participation Motivation Inventory, and the Competitive State Anxiety Inventory-2. A principal components factor analysis was conducted on the PMI and revealed eight factors labeled: Achievement/Status, Being Active, Fitness, Team, Energy Release, Friendship, Skills, and Fun.

A MANOVA was conducted on the factor scores. Participant motives between parent-coached and nonparent-coached participants did not significantly differ. No significant differences were found on a MANOVA on competitive state anxiety between parent and nonparent-coached athletes. While parent involvement in youth sport has often been negatively regarded, this investigation did not support a differential impact on children.

Social support has been identified repeatedly in the literature as being beneficial to individuals suffering from injury or illness. Because of the frequent interaction between athletic trainers and student athletes, the athletic trainer is in a unique position to provide a variety of social support to the athlete. The purpose of the study by Barefield and McCallister (1997) was (1) to identify the degree to which athletes actually receive each of eight types of social support; (2) to identify the types of social support athletes need or expect to receive from staff and student athletic trainers; and (3) to compare the athletes' satisfaction with the quality of the support received from athletic training staff and students. A questionnaire was used to collect data for this study. It was administered at a Division I university. Eighty-five student-
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athletes at a Division I university were surveyed following a questionnaire consisting of 24 questions that used a five-point Likert rating scale. There was no significant difference in the amount of social support received by athletes from staff and student athletic trainers, in athletes' expectations of staff and student athletic trainers with regard to provision of social support, or in the athletes' level of satisfaction with staff and student athletic trainers' provision of social support. Examined collectively, the findings indicate that athletes do not differentiate between staff and student athletic trainers with regard to the provision of social support. However, finding that athletes do not differentiate between staff and student athletic trainers in this area is significant in itself and has implications for athletic training education programs.

VanYperen (1995) studied 65 highly skilled young male soccer players (mean age = 16.6 years) and employed a 7 month longitudinal design to examine the causal relationship between performance level and interpersonal stress within the team. Particular attention was paid to the moderating effect of parental support. No evidence was found that interpersonal stress within the team was an important determinant of performance level. Rather, a low performance level leads to negative feelings about the social climate within the team.

Terry (1984) investigated the coaching preferences of 95 male and 65 female elite athletes competing at Universiade '83 (Edmonton, Canada). Preferred coaching behaviour (PCB) was measured using a version of the Leadership Scale for Sports (Chelladurai and Saleh, 1978, 1980). Preference scores were analyzed on the basis of sex, age, nationality, and type of sport. A MANOVA indicated that males prefer significantly more Autocratic behaviour than females (p = .039). Also, athletes in team
sports prefer significantly more Training behaviour \( (p = .001) \), Autocratic behaviour \( (p \text{ less than } .001) \), and Rewarding behaviour \( (p = .017) \), and significantly less Democratic behaviour \( (p \text{ less than } .001) \) and Social Support behaviour \( (p = .002) \) than athletes in individual sports. No significant differences in PCB attributable to the age or nationally of the athlete were found. In addition, data collected in a previous study (Terry and Howe, 1984), which examined the PCB of 'club' athletes, was included to facilitate a comparison of club v elite athletes. A MANOVA showed that elite athletes prefer significantly more Democratic behaviour \( (p = .01) \) and Social Support behaviour \( (p = .001) \), and significantly less Rewarding behaviour \( (p = .01) \) than athletes at a 'club' level. Although differences between subject groups were found, it can be concluded that athletes generally tend to favour coaches who "often" display Training behaviour and Rewarding behaviour, "occasionally" display Democratic behaviour and Social Support behaviour, and "seldom" display Autocratic behaviour.

2.4 Studies relating to Self Concept, Social Support and Coping skills among Athletes

Pfeifer (2011) examined perceived social support and coping self-efficacy in relation to self-reported trauma symptomatology in a college student sample. This study also utilized both traumatic frequency and traumatic load (number of different traumatic events) as an indicator of traumatic events to examine the relative contributions of each of these variables. Results indicate that trauma symptomatology was inherently different based on sex, with women reporting significantly more symptomatology relative to men. Traumatic load was a significant predictor of traumatic symptomatology as indicated by the PTSD Checklist – Civilian version and
approached significance in the *Trauma Symptom Checklist*-40, while traumatic frequency (absolute number of traumatic events) was not a significant predictor of trauma symptomatology as indicated by either the *PTSD Checklist – Civilian version* or the *Trauma Symptom Checklist*-40. Perceived social support and coping self-efficacy were both significant predictors of trauma symptomatology, such that as perceived social support and coping self-efficacy increase, trauma symptomatology decreases, irrespective of the outcome measure used.

Findings point to differences between males and females in terms of trauma symptomatology, and also indicate that *how* the trauma is operationalized (and measured) is of importance. Finally, social support and coping self-efficacy predicted psychological adjustment (trauma symptoms) beyond sex and the event itself, suggesting their utility for inclusion in interventions with college students who have experienced trauma.

Orozco (2007) examined the variables of ethnic identity, perceived social support from family, friends, and a significant other, coping strategies, university environment, and cultural congruity to determine their relation to the resilience of 150 Latina/o college students. Participants (72 males and 78 females) completed a survey packet that included a demographic questionnaire, the Revised Multigroup Ethnic Identity Measure, Multidimensional Scale of Perceived Social Support, Student Coping Scale, University Environment Scale, Cultural Congruity Scale, and Connor-Davidson Resilience Scale. The results showed that ethnic identity, familial, friend, and significant other support, coping strategies, university environment, and cultural congruity accounted for 51% of the variance in measured resilience. These findings
were discussed in relation to the existing resilience literature and implications for future research were noted.

Mummer, Schofield and Perry (2004) studied to identify how self-concept, social support and coping style can act as protective factors against the potentially deleterious effects of negative performance in competitive sport. A cohort of swimmers ($N = 272$) competing at the Australian Age National Championships was examined to discriminate between three performance-related outcomes - initially successful performance, resilient performance (initial failure, followed by subsequent success) and non-resilient performance (initial failure followed by subsequent failure).

A discriminant function analysis revealed two main discriminant functions. The first discriminated resilient performers from the other two groups. Resilient performers showed higher self-perceptions of physical endurance, but lower perceptions of perceived social support from significant others than the other two groups. The second discriminant function discriminated initially successful performers from resilient and non-resilient performers. The initially successful performers scored more highly than the other groups on the coping with adversity and peaking under pressure subscales of the Athletic Coping Skills Inventory. Importantly, this study demonstrates a relationship between psychological constructs and a measurable performance outcome. It is suggested that a high concept of physical endurance, good self-perceptions for peaking under pressure and coping with adversity, and a level of independence from social support are important factors in swimming performance.

Green and Weinberg (2001) investigated to examine athletic identity, coping skills, and social support as moderators of mood disturbance and physical self-esteem
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with the occurrence of injury in recreational participants. Thirty participants, who sustained an injury that prohibited physical activity for at least 6 weeks, completed a battery of questionnaires including measures of social support (Sarason, Levine, Basham, & Sarason, 1983), coping skills (Smith, Smoll, & Ptacek, 1990), athletic identity (Brewer, Van Raalte, & Linder, 1993), mood state (McNair, Lorr, & Droppleman, 1971), and physical self-esteem (Fox & Corbin, 1989).

Results from multiple regression analysis revealed that individuals’ satisfaction with their social support network was significantly related to mood disturbance with increased satisfaction leading to lower levels of mood disturbance. No other relationships were significant. Results were discussed within the context of cognitive appraisal models of adjustment in order to better understand the injury process.

Wasley and Lox (1998) investigated on self-esteem and coping strategies of athletes with acute and chronic injuries. Specifically, athletic injury has been negatively associated with self-esteem, while certain coping strategies may enhance adherence to rehabilitation (1, 4). Little is known, however, concerning the effect of acute (sudden specific event) versus chronic injury (repetitive injury over a prolonged period of time) on self-esteem and coping strategies. The Rosenberg Self-esteem Inventory (3), selected subscales of the Ways of Coping Questionnaire (2), and a demographic questionnaire were administered. The subscales of Ways of Coping Questionnaire employed were Seeking Social Support, Accepting Responsibility for the injury, and Escape Avoidance of the injury. To assess the influence of acute versus chronic injury status, effect sizes (ES) were calculated. Although no difference was found for Accepting Responsibility, chronically injured athletes scored higher on
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Escape/ and lower on Seeking Social Support than athletes with acute injuries. Those with chronic injuries also second more negatively on self-esteem than acutely injured athletes.

These preliminary results suggest the type of injury may differentially affect self-esteem and coping behavior. As self-esteem is theorized to be relatively stable construct, it is perhaps not surprising that chronic injuries have a greater effect than acute injuries. Chronically injured athletes also sought social support less and engaged in more escape/avoidance behavior, suggesting that they cope with injury differently than those with acute injuries.

The compilation of the research studies conducted in the areas of social support, coping styles and self esteem elaborated in this chapter has provided better understanding of the dynamics of role of social support in the development of self concept and coping skills among sportspersons. These studies have provided the necessary background information needed for the formulation and conduct of the present investigation on the analysis of support infrastructure, coping style and self concept among Indian sportspersons.