Review of Related Literature

Study of Sports Competition Anxiety

Singh and Gaurav (2011) study is mainly concerned with volleyball players who participated in the inter-college competition. Now days, the Game volleyball is becoming as a professional sport rather than the competitive sport. So the competitiveness among the volleyball players is growing up day by day with different color. The main purpose of this study was to compare pre-competitive anxiety and post-competitive anxiety in inter-collegiate volleyball players. A group of 170 volleyball players (boys=85 and girls=85) were selected from different colleges affiliated to Guru Nanak Dev University, Amritsar, Punjab, India through purposive sampling technique. Their age was ranged from 18 to 25 years. Data were collected from athletes using a Sports Competitive Anxiety Test - (SCAT) consists of fifteen items which include 5 spurious items, 8 positive items and 2 negative items. The t-test was used to test the effect of anxiety level between pre and post completion. The significance level was determined as p<0.01. The result of the study reveals that there was significant difference in 0.01 levels of pre-competitive anxiety and post-competitive anxiety among the male and female inter-collegiate volleyball players.

Kumar and Prabhakaran (2011) studied the comparative result of the Psychological Profiles of Rajasthan and Madhya Pradesh International & National Level Male Cricket Players. The subject’s age ranged between 18-25 years, they all were selected randomly from the Rajasthan and Madhya Pradesh U-19,U-22 Cricket teams, and the experts has made two groups of 49-49 players, one group made up of Madhya Pradesh cricket players and another group made up of Rajasthan Cricket players, those who are continuously participating at National and International level. The experts used questionnaires of Rainer and Martin’s Sports Competition Anxiety Test and the Eysenck, Maudsley Personality Inventory; the questions addressed various aspects of Sports Competition Anxiety and Personality traits of cricket players respectively. The questionnaire has filled by the Rajasthan and Madhya Pradesh U-19 & U-22 Cricket teams players respectively. For the evaluation of questionnaire Two Sample T-test was employed, and the findings reveled that there was a significant difference found i.e. 2.8 in their Personality
parameters, it means Rajasthan Cricketers were better in their Personality as compare to Madhya Pradesh Cricketers and found Insignificant i.e. 0.11 in the SCAT, which means there was no difference in Sports Competition Anxiety of Rajasthan Cricketers and Madhya Pradesh Cricketers. Sports Psychology can help a lot in assessing the personality and sports anxiety characteristics of the players or individuals performance in cricket not only demands systematic training to develop physical and physiological variables but also demands training and considerations of psychological characteristics for success in this field.

Nigam (2009) investigated the effects of self-efficacy on sports competition anxiety. A total of Forty students of psychology belong to D. P. Vipra College, Bilaspur (CG) affiliated to Guru Ghasidas University, Bilaspur were randomly selected for the purpose of study. Sports Competition Anxiety Test and the Physical Self-Efficacy Scale were administered upon all subjects who volunteered to participate in the experiment. Results of the study revealed that females who are high in self-confidence will have low levels of competitive trait anxiety. The findings from this study also indicated that private and public self-consciousness and social anxiety are all contributing factors in predicting competitive trait anxiety.

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

Singh et al. (2011) studied compares the pre-competitive and post-competitive anxiety in inter-university basketball players. A group of 30 players (15 of each sex with age group of 18-25) were selected from Amritsar, Punjab, India through purposive sampling technique. Data were collected from athletes using a Sports Competitive Anxiety Test. The result of the study reveals that there was significant difference in 0.01 levels of pre-competitive anxiety and post competitive anxiety among the male and female inter-university basketball players.

Behzadi et al. (2011) studied the relationship between goal orientation and competitive anxiety and comparing them in female athlete students engaging in individual and team sports. Using Morgan’s table, 120 athletes were randomly selected from the team sports and 80 were
selected from the individual sports. The Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda and Nicholls, 1992) and Sport Competition Anxiety Test (SCAT; Martens, 1990) were used for data collection. The results of Spearman’s test revealed that only in team sports is there a negative significant relationship between task orientation and competitive anxiety. Moreover, the results of Mann-Whitney U test showed that there is no significant difference between individual and team sports in task orientation and goal orientation and that there is only a significant difference between team and individual sports in competitive anxiety and ego orientation with higher competition anxiety in the team athletes and higher ego orientation in the individual athletes (p>0.05). Apparently, since the performance of an athlete in team sports depends on the team performance, the role given to the individual may interfere with their inner role and this issue leads to anxiety in the individual.

Elaziz (2010) studied a psychological rehabilitation program for soccer players of anterior cruciate ligament (ACL) injury and to find out the impact of this program on self-confidence level and competition anxiety dimensions (cognitive -physical - confidence) to injured players. The researcher applied experimental method by using two groups (control and experimental). The sample included 8 of soccer players of (ACL) injury who were divided into two groups and he also used some tests to measure the functional state of injured knee to make sure of players' safety as control procedure, added to sports confidence test and competition anxiety state inventory. Most important results that the researcher could reach were that the proposed program impacted positively on improving self-confidence level, decreasing of cognitive and physical anxiety dimensions and increasing of confidence which is the positive dimension of sports competition anxiety.

Azimirad and Jalilvand (2012) studied the relationship between spiritual transcendence and competitive anxiety in athletes. For this field, 400 of men athletes in Kermanshah city by stratified sampling were selected and completed the spiritual transcendence and competitive anxiety scales. Results of Pierson correlation indicated that was positive correlation between connectedness (r=0.331), prayer fulfillment(r=0.411), universality (r=0.156) and spiritual transcendence (r=0.234) with sportive self-confidence, and negative correlation between connectedness (r=-0.124), prayer fulfillment(r=-0.443), universality (r=-0.415) and spiritual transcendence(r=-0.397) with sportive self confidence with somatic anxiety and between prayer fulfillment(r=-0.271), universality (r=-0.312) and spiritual transcendence (r=-0.221) with
sportive self-confidence with somatic anxiety. Results of multiple regression by inter method showed that connectedness, prayer fulfillment and universality were explained 0.287 variance of competitive anxiety (cognitive-somatic) and this variables were explained 0.319 variance of sportive self-confidence (p<0.05).

Dunn and Dunn (2001) examined the degree to which the Sport Competition Anxiety Test (SCAT; Martens, 1977) and the Sport Anxiety Scale (SAS; Smith, Smoll, & Schutz, 1990) shared variance with the four subscales of the Collegiate Hockey Worry Scale (CHWS; Dunn, 1999)—a sport-specific measure of athletes’ dispositional tendencies to worry about performance failure, negative social evaluation, physical danger, and situational uncertainty. Participants were 178 male intercollegiate ice hockey players. Correlation and regression analyses reinforced the links between worries about failure and negative social evaluation to competitive trait anxiety (CTA). However, neither the SCAT nor the SAS shared more than 5.8% of the variance surrounding athletes’ worries pertaining to physical danger and situational uncertainty. Findings are discussed in the context of Martens, Vealey, and Burtons’ (1990) recommendation to develop instruments with separate subscales measuring different situational components of CTA.

Torkfar et al. (2011) studied mental role in sports competitions and also the consequences of anxiety in sports psychology from the topics to be discussed is undeniable. One of environments rich in excitement and anxiety, the sports environment deal with the excitement and anxiety is inevitable. The purpose of this study investigated the relationship between dimensions of emotional intelligence and competitive anxiety in male and female student athlete group and individual courses are. 270 student athletes (180 team sports, individual sports in 1990) from the University of Fars province, all of which have 6 to 15 years had the championship, once the night before the race and the second time within half an hour before the contest conducted by questionnaire competitive anxiety and emotional intelligence Martinez (1970) to fill. Kendall correlation test to determine the relationship between variables, Smirnov test for normal distribution of data, independent samples T-test for comparing normal and test agents "U" Mann-Whitney to compare variables that were not normal. Also SPSS software for data analysis was used. Results showed that the only spontaneity between the dimensions of emotional intelligence with self-confidence was a significant relationship (p <0.05) but the relationship between all these dimensions except for anxiety, cognitive empathy was significant.
(p <0.05). All aspects of the relationship between self-awareness and empathy with the exception of physical anxiety were not significant (p> 0.05). Between athletes of individual and group about emotional intelligence and social skills and self-regulation variables that there are significant Differences (p <0.05). But between these two variables on self-awareness, empathy and spontaneity differences were not significant (p> 0.05). EI competitive anxiety is associated in most cases.

Faridnia et al. (2012) studied the effect of neuro feedback training on the anxiety of elite female swimmers. To that aim, 20 professional swimmers were selected through purposive sampling and were randomly divided into an experimental and a control group. The procedure of the research involved 12 sessions (45 min per session) of neuro feedback training with two protocols: (1) increased SMR activity and decreased high beta and theta activity, (2) increased beta activity and decreased high beta activity. Before the training, the pretest was administered using SCAT and then the posttest was administered. Two-factor analysis of variance (2 _ 2) was applied for data analysis and the results were: the main effect of test and the interaction between test and group were significant, but the main effect of group was not significant. Given the significance of the interaction between test and group, correlated t-test was applied to compare the pretest and posttest scores of each group. The results indicated that there is a significant difference between the pretest and posttest scores of the experimental group in anxiety. Yet this difference was not significant in the control group. Correlated t-test was also applied to compare the two groups in the pretest and the posttest. The results revealed that in the pretest there was no significant difference between the groups in terms of anxiety, but this difference was significant in the posttest. It can thus be concluded that neurofeedback training reduces anxiety in elite female swimmers.

Avramidou et al. (2007) examined state and trait anxiety in competitive lifesavers and swimmers. The participants completed the SAS and the CSAI-2d before a training session and the CSAI-2d again before a competition. The competitive lifesavers were found to have lower levels of cognitive and somatic anxiety than competitive swimmers. Both groups were found to have lower levels of self-confidence but higher levels of somatic anxiety before a competition than before regular training sessions. Lifesavers found their levels of somatic anxiety to be more facilitative than the swimmers did. Both groups perceived that higher levels of self-confidence were more facilitative before competition than before training. Differences in the relationship
between state and trait anxiety for swimmers and lifesavers were observed. The generally lower levels of cognitive and somatic state anxiety in lifesavers and their interpretation of somatic anxiety during competition would benefit their performance and decision making.

Campbell and Jones (2012) examined the pre competition temporal patterning of anxiety and self-confidence in wheelchair sport participants. The subjects comprised of 103 male (n = 87) and female (n = 16) wheelchair sport participants who participated at national level or above in a variety of sports. All the subjects completed a modified version of the Competitive Trait Anxiety Inventory-2 (CTAI-2) which measured three dimensions of their normal competitive anxiety response (intensity, frequency, and direction), at three time periods preceding competition (1 week, 2 hours, and 30 minutes before). The findings suggest that wheelchair sport participants show a similar pre competition anxiety response to nondisabled sport participants. However, there appears to be some differences, particularly in the intensity of somatic anxiety symptoms experienced and the reduction in self-confidence just prior to competition. The findings also provide further support for the distinction between intensity, frequency, and direction of competitive anxiety symptoms.

Levy et al. (2009) investigate 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.

Hays et al. (2009) examined the role of confidence in relation to the cognitive, affective, and behavioural responses it elicits, and identified the factors responsible for debilitating confidence within the organizational subculture of world-class sport. Using Vealey’s (2001) integrative model of sport confidence as a broad conceptual base, 14 athletes (7 males, 7
females) were interviewed in response to the research aims. Analysis indicated that high sport confidence facilitated performance through its positive effect on athletes’ thoughts, feelings, and behaviours. However, the athletes participating in this study were susceptible to factors that served to debilitate their confidence. These factors appeared to be associated with the sources from which they derived their confidence and influenced to some extent by gender. Thus, the focus of interventions designed to enhance sport confidence must reflect the individual needs of the athlete, and might involve identifying an athlete’s sources and types of confidence, and ensuring that these are intact during competition preparation phases.

Woodman and Hardy (2003) 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.

Hatzigeorgiadis et al. (2009) examined the effects of motivational self-talk on self-confidence, anxiety, and task performance in young athletes. Participants were 72 tennis players. The experiment was conducted in five sessions: baseline assessment, three training sessions, and final assessment. After the baseline assessment participants were divided and assigned randomly into experimental and control groups. The two groups followed the same training program with the experimental group practicing the use of self-talk. In the last session, the final assessment
took place. A forehand drive test was used to evaluate task performance, and the Competitive Anxiety Inventory-2R was used to assess self-confidence and anxiety. A two-way mixed model MANOVA revealed that task performance improved for the experimental group (p < .01) and remained stable for the control group; self-confidence increased (p < .01) and cognitive anxiety decreased (p < .05) for the experimental group, whereas no changes were observed for the control group. Correlation analysis revealed that changes in task performance were moderately related to changes in self-confidence (p < .05). The results of the study showed that self-talk can enhance self-confidence and reduce cognitive anxiety. Furthermore, it is suggested that increases in self-confidence can be regarded as a viable function explaining the facilitating effects of self-talk on performance.

Chen and Wang (2010) investigate the relationship between the competition confidence and the career development of college table tennis players in Taiwan. A total of 360 players (256 males and 104 females) were surveyed. The competition confidences of different categories are described. The findings include the career exploration, career orientation, career decision and environmental exploration are presented in contrast with the competitor confidence scale. With the positive correlation of competitor confidence and careers development, but player's academic record with negative correlation.

Dureja and Singh (2011) compare the self-confidence and decision making abilities between psychology and physical education students. A total of eighty (N = 80) male subjects participated; forty (N = 40) psychology students and forty (N = 40) physical education students from various affiliated colleges of Panjab University, Chandigarh were randomly selected for the collection of data. The age of the subjects ranged between 19 to 25 years. Self-confidence was measured by applying self-confidence questionnaire and decision making was measured by applying decision making questionnaire. The “t” test was applied to find out the difference between mean scores of psychology and physical education students. The level of significance was set at 0.05. The results revealed significant difference with regard to variable self-confidence between psychology and physical education students. However, the results with regard to the variable decision making were found statistically significant between psychology and physical education students. Physical education students have better self-confidence and decision making level as compared to their counterpart psychology students.
Balaji and Jesudass (2011) study was to find out the differences in Mental Toughness among Cricket Players of different age groups. To achieve this purpose, ninety Cricket players at the age group of 10-21 years were selected from Chennai District, who regularly practice the game and participate in various tournaments. “Mental Toughness Questionnaire” a standardized sports psychological inventory designed by Dr. Goldberg, was responded by all the subjects. The collected data was analyzed using simple analysis of variance (ANOVA). The results of the study showed that there was a significant difference in Mental Toughness among Cricket Players of different age levels at 0.05 level of confidence. It was concluded that Cricket Players of age group 18-21 years showed significantly greater mental toughness than the other two age groups. This may be due to their experience in the game.

Kuan and Roy (2007) examined the association between goal orientations and mental toughness and its influence on performance outcomes in competition. Wushu athletes (n = 40) competing in Intervarsity championships in Malaysia completed Task and Ego Orientations in Sport Questionnaire (TEOSQ) and Psychological Performance Inventory (PPI). Using cluster analysis techniques including hierarchical methods and the non-hierarchical method (k-means cluster) to examine goal profiles, a three cluster solution emerged viz. cluster 1 - high task and moderate ego (HT/ME), cluster 2 - moderate task and low ego (MT/LE) and, cluster 3 - moderate task and moderate ego (MT/ME). Analysis of the fundamental areas of mental toughness based on goal profiles revealed that athletes in cluster 1 scored significantly higher on negative energy control than athletes in cluster 2. Further, athletes in cluster 1 also scored significantly higher on positive energy control than athletes in cluster 3. Chi-square ($\chi^2$) test revealed no significant differences among athletes with different goal profiles on performance outcomes in the competition. However, significant differences were observed between athletes (medallist and non medallist) in self-confidence ($p = 0.001$) and negative energy control ($p = 0.042$). Medallist’s scored significantly higher on self-confidence (mean = 21.82 ± 2.72) and negative energy control (mean = 19.59 ± 2.32) than the non-medallists (self confidence-mean = 18.76 ± 2.49; negative energy control mean = 18.14 ± 1.91).

Bhambri et al. (2005) examining the effect of psychological interventions such as General relaxation, Imagery and combination of both on the mental toughness dimensions of Table-Tennis players. The study was carried out on 32 national level table–tennis players in the
age group of 12-17 years. Loehr psychological performance inventory was administered to assess their mental toughness on seven variables viz. self confidence, negative–energy, Attentional control, visual and Imagery control, motivational level, positive energy and attitude control. The data obtained was analyzed using ANOVA, t test and percentage distribution. The results indicate that all the 3 psychological interventions enhanced mental toughness dimensions of sports persons. However combined intervention consisting of both relaxation and imagery therapies showed the maximum effect on mental toughness dimensions.

Golby and Sheard (2004) studied mental toughness and hardiness at different levels of rugby league. The increasingly business-like environment of professional sport has resulted in greater scrutiny and analysis of players' performance. The roles of physiological parameters in predicting success in the world of professional and amateur sport are well established. However, to date, evidence is sparse concerning the role of personality traits in predicting such success. The present study examined the potency of measures of personality style and mental skills in predicting success in the criterion sport of professional rugby league. Mental toughness was assessed by questionnaire using the Psychological Performance Inventory. Hardiness was assessed by questionnaire using the Personal Views Survey III-R. Subjects in this study were 115 professional rugby league footballers representing the top three playing levels in the game in Great Britain (International, Super League, and Division One). Findings demonstrated that performers playing at the highest standard (International players) scored significantly higher in all three hardiness subscales (commitment, control and challenge) and in two of the seven mental toughness subscales (negative energy control and attention control). Results are discussed relative to previous findings, in particular, of the efficacy of high levels of hardiness. Practical implications focus on the advocacy of mental toughness and hardiness training to improve sports performance.