CHAPTER-II

REVIEW OF LITERATURE

2.1 INTRODUCTION

In the present chapter, a review of work carried out on three psychological variables is presented in a summarized form. These variables are Sports Aggression, Mental Toughness and Sports Competition Anxiety.

2.2 SPORTS AGGRESSION

By definition aggression can be simply described as “an overt verbal or physical act that can psychologically or physically injure another person or oneself” (Husman, Silva, & Silva, 1984). Although, aggression is generally taken as a negative emotion by common people, instrumental aggression is a trait which is instilled in the players to make them achieve bigger goals (Jarvis, 2006). Although it is a part of the psyche of all living organisms, in sports this emotion has been given significant importance because of its ability to affect the performance of individual players and teams and the work by Rahimizadeh showed that aggression mean is found to be lower in
athletes when compared with non athletes amongst the group of 697 school students in Kashmar city, Iran (Rahimizadeh, Arabnarmi, Mizany, Shahbazi, & bidgoli, 2011). There are other reports by researchers which underline the fact that indulgence in sports activities and training sessions channelize the aggressiveness in the participants and this emotion takes a positive dimension by training. Thus, sports person are aggressive but they have instrumental aggression dominating over hostile aggression (Aktop, Ėezelik, Kaplan, & Seferoelu, 2015; Acet, Tazegel, Kocapaenar, & Bae, 2012).

Aggression among student athletes of judo, taekwondo, volleyball indoor soccer at the University of Tiran was assessed by Reza and coworker (Reza, 2012). 90 subjects in 19- 23 years range from four different sports viz. judo, taekwondo, volleyball and indoor soccer attended and individual athletes from 25 sports as a simple random sample selection for investigation and were used in analysis of descriptive and inferential statistics. Descriptive statistics used for the Evaluation of central tendency Index such as (mean, median, thumb) and the size of the dispersion (range, variance, standard deviation) in the inferential statistical test, one way analysis of variance (ANOVA) technique was used. They found that there is no
significant difference between student athlete’s aggression in taekwondo, judo, volleyball and indoor soccer ($p > 0.05$). Yadav (2010) investigated the comparison of aggression level of players of team games and individual sports of inter-university level. ‘Sports Aggression Inventory’ developed by Anand Kumar and Prem Shankar Shukla was selected as criterion measure. The total sample of the study was “110” players of inter-university level. “55” subjects were of individual sports, ten each from Badminton, Judo and Gymnastics; seven from Swimming while three from 100mts, 200mts, 400mts, 800mts, shot put and long jump. “55” subjects were of team games, twelve each from basketball and volleyball; fifteen from hockey and sixteen from football. The data was analyzed by using t-test (Yadav & Singh, ).

Another investigation on aggressive tendencies involving a sample of 2,022 Spanish students (51.1% males) ranging in age group of 12 to 16 years from Compulsory Secondary Education showed that individuals with aggressive behavior had little interest in activities, perceived their relationship with their parents as negative and they had lower self esteem. On the other hand individuals with lesser aggression were positively active in activities and enjoyed healthy
relations with parents and peers. These investigations were carried out on with the help of Teenage Inventory of Social Skills (TISS) and Self-Description Questionnaire II (SDQ-II) was used for self concept (Torregrosa, Ingles, & Garcia-Fernandez, 2011). Sharma et al. (2012) studied to determine the aggressive behavior in soccer players at different levels of competition. Present study conducted on 300 male soccer players who were divided into three categories according to three different levels: inter-region intervarsity and all India intervarsity level. Aggression of the players was measured by using Aggression questionnaire of Kumar & Shukla (1988). The results of the study revealed that all India intervarsity players had lower level of aggression and inter-regional players had higher level of aggression amongst the groups (Sharma, Khan, Haider, & Khan, 2012).

Another report on aggression in players, involved 1364 football teams participated in Aragonese Federation of Soccer (Spain). The researchers undertook this investigation to design a tool to detect aggressive teams on the basis of their behaviour. The scale homogeneity was measured by Crombach Alpha. They concluded that early detection is possible on the basis of referee reports, observation
of matches and inputs from coaches (Gutierrez, Gimeno, Marcen, & Saenz, 2013).

Donahue et al. (2009) examine the interplay between harmonious and obsessive passion and aggressive behavior in sports. They hypothesized that players who are obsessively-passionate about basketball should report higher levels of aggressive behaviors than harmoniously-passionate players in general and especially under self threat. The using Dualistic Model of Passion as a guiding framework basketball players indicated their level of passion and aggression during typical basketball situations using a self-reported questionnaire. The results: In Study 1, results demonstrated that athletes with a predominant obsessive passion for basketball reported higher levels of aggression on an aggression scale than athletes with a harmonious passion. Study 2, harmoniously-passionate and obsessively-passionate athletes were randomly assigned to one of two conditions: self-threat and self-affirmation. They predicted that under self-threat obsessively-passionate players should report higher levels of aggressive behavior than harmoniously passionate players. No differences were expected between obsessively and harmoniously passionate players in the self-affirmation condition. These hypotheses
were supported. The present findings reveal that having an obsessive passion is associated with aggressive behavior especially under identity threat. The love for one’s sport may lead to some maladaptive interpersonal behavior especially if such love is rooted in a sense of identity that is contingent on doing well in that sport (Donahue, Rip, & Vallerand, 2009). Thus healthy approach towards sports is of utmost importance to have better performance (Agyar, 2013; Alipour, 2011).

Another team of researchers noted the levels of aggression are found to be lesser in the individuals with more number of experience and training. Gazar et al. (2010) studied the relationship between sport aggression and years of practice to Egyptian wrestlers. The relationship between sport aggression and age wrestlers to identify the differences between Egyptian wrestlers (male/female) in sport aggression and also to determine the relationship between sport aggression and the ranking of Egyptian wrestlers. The researchers used the survey method and applied the research on sample of 68 wrestlers (46 Greco Roman male and 22 free-style female) and applied the sport aggression measurement to collect data. Most important results was that there are positive correlation coefficient
between the number of years of practice and sport aggression for male wrestlers, also there are statistical significant differences between ranking of advanced wrestlers and ranking of less advanced wrestlers in sport aggression for wrestlers of less advanced. One of the main recommendations of the research is the need to focus on the psychological preparation for both of male and female Egyptian wrestlers, as well as the need for sport psychologists to work with national teams.

Thus, the aggression can be positively controlled by training, experience and age (Gazar & Raziek, 2010). The pair recommended regular sports psychologist for the national team so that the players can be given professional inputs about their aggression and this emotion can be exploited towards the improvement of the performance of the players without jeopardizing the sports ethics and code of conduct.

Ramirez (2008) reviews the results of two decades of research on moral approval of aggressive acts conducted in several countries with different religious and cultural backgrounds. The nationally-adapted version of the Lagerspetz and Westman questionnaire was administered to university students of Finland, Poland, Spain, Japan,
Iran and India. The respondents had to indicate levels of justification of several aggressive acts of different quality and intensity in the context of different social justifications. Slight method variations preclude the possibility of direct comparison the pattern of effects in the different countries leads to interesting conclusions. All countries more drastic forms of aggression (e.g., killing, torture) are less accepted than non-dangerous forms of such behavior (e.g., hindering, being ironic); and aggressive acts that are socially justified (in terms of protection of self or other) are clearly more accepted than ones with no such justification (problems of communication). There are also some striking differences among the samples studied. The patterns of moral approval of various kinds of aggressive acts are only to some extent common to most cultures while there are some culturally bound differences in these attitudes (Ramirez, 2007).

Anger, aggression, and humor during 95 floor hockey games in a small fishing village in Newfoundland were investigated by Palmer. He noted that during the games, anger and over-aggression appeared more frequently amongst individuals of approximately equivalent skill levels. Humorous over-aggression, amongst players with noticeable diversities in skill level was more pronounced. Probably the difference
in skill levels gave way to confidence amongst the players and they took the game as a play rather than as a serious threat to their performance and skills. These observations underline the fact that more training not only increases the proficiency and skill of the individuals it also gives a certain kind of confidence which decreases the frustration and controls the aggression in the players (Palmer, 1993).

All these observations cited above points towards the important role of instrumental aggression in enhancing the performance of the players at various competitive levels in sports (Mereuta & Mereuta, 2013). It is a positive trait of individual which can be used for the betterment of the performance and achievement of goals and individual milestones (Bergsträem, Hagsträemer, Hagberg, & Elinder, 2013; Lasikiewicz, Myrissa, Hoyland, & Lawton, 2014; Lieberman et al., ). This attribute can be enhanced by training and suggestions by the sports psychologists (Dollard, Miller, Doob, Mowrer, & Sears, 1939). Even the age of the players and their ranking and skills also play an important role when we talk about aggression in sports (Ennis, 2013; Esfahani & Soflu, 2011). At different level of competitions, we see different levels of aggression and it is an important variable to
study in sports competitions so that we can get more inputs on sports psychology and understanding of individual performers and team dynamics (Rahimizadeh et al., 2011; Uludag, 2014).

2.3 MENTAL TOUGHNESS

Mental toughness is a psychological characteristic which enables an athlete to give his best performance in the most challenging of situations (Kaiseler, Polman, & Nicholls, 2009). This character is a manifestation of many psychological parameters in varying proportion from individual to individual (Delaney, Goldman, King, & Nelson-Gray, 2015). The world of sports has become serious business with millions of dollars being invested in construction of sports facilities at national and international levels. Lots of money has come into sports due to involvement of private players in the market. Large amount of money is at stake in terms of business house opening franchises in sports arena. Under these conditions the expectations from individual performers and teams have gone very high in terms of results and game quality. The changing scenario has put a lot of pressure on players and mentally tough players are able to cope with stressful conditions and improvise their game according to the situations to give their best performance.
A sample of 112 sport performers (55 men and 57 women) aged between 18 and 51 years (M = 29.3, s = 10.3) were studied at different levels like recreational to national level in a variety of sports. Mentally tough individuals maintained a certain level of quality of performance during various testing conditions (Crust, 2009). Gany and Belal (2010) studied psychological and mental abilities for the elite of junior players through applying a program of mentoring and some techniques of neuro-linguistic programming. Considering that the athlete does not have any social or psychological problems, the important goal from sports psychology is to improve the performance in the competition; therefore, the researchers have studied different psychological techniques, participated in courses and various programs to get the expertise, and certified practice. The study sample had made up of 15 players, representing the Basketball National Team of Youth. The results show the importance of using mentoring with elite players besides the other psychological methods. Explicit improvement in all mental and psychological abilities for the elite of junior players had also recorded (Gany, Belal, & Azim, 2010).

Mental toughness although considered very important in sports arena, it is equally significant in other aspects of an individual’s life.
A group of 161 first year sport students at a UK university using a self-report Mental Toughness Questionnaire-48 (MTQ48) were investigated for their year grade and progression (pass, fail, or re-sit). Significant and positive correlations were found between total mental toughness, grades, and progression. Results suggest that the MTQ48 may be a useful screening device to identify students at risk of failing and dropping out of their program. Interventions that target life control and interpersonal confidence would appear to be most salient (Crust et al., 2014).

There is no doubt that outcome in a sports competition has a direct relation with the mental toughness. Cognitive foundations of mental toughness by employing directed forgetting paradigm, in which participants are given a surprise memory test for material they were previously instructed to forget. Mental toughness did not influence the recall of a to-be-forgotten list as shown by regression analysis, but individuals with high mental toughness exhibited superior recall of a to-be-remembered list. These observations show that mentally tough individuals have better ability to put off undesired information from interfering with existing goals. Thus sports persons can perform according to the instructions given by their coaches and
recall the tactics and tips given during the training sessions more easily and employ them for the good (Dewhurst, Anderson, Cotter, Crust, & Clough, 2012). Omar-Fauzee et al. (2012) examine the mental toughness perceived by selected the National football players. A sample of twelve Malaysian footballers (current and ex-players), aged 19 to 57 years old agreed to participate. All of them have been playing in the Malaysia National Football League that consists of four former national footballers, four former state footballers and four currently active footballers. Among them, five individuals are active as a coach. A semi-structure interview scheduled was used in the research. All of the respondents have signed the informed consent letter for tape-recorded during the interviewed. The transcribed verbatim from the tapes were content analyzed by the authors to identify the themes. Results show that eight themes emerged from the interviews, which are motivation, negative energy, self-confidence, positive energy, visual and imagery control, patriotic spirit, perseverance and attention control. Almost all of the themes have been identified by previous researchers (i.e., Fourie & Potgieter, 2001; Jones, Hanton & Connoughton, 2002; 2007; and Loehr, 1986), except
for patriotic and perseverance. Recommendations for further research also suggested (Omar-Fauzee et al., 2012).

Mental toughness assessment by Golby and co-worker during professional rugby league employed questionnaire based on Psychological Performance Inventory. 115 professional rugby league footballers representing the top three playing levels in the game in Great Britain (International, Super League, and Division One) were the sample of the study. Findings demonstrated that performers playing at the highest standard (International players) scored significantly higher mental toughness scales (Golby & Sheard, 2004). Another comparative study of mental toughness of athletes and non-athletes involved 927 athletes and 931 non-athletes showed higher-order organization of mental toughness in athletes. Taken together, these findings support the theoretical assumption that mental toughness is a higher-order construct encompassing different characteristics and that sport participation is associated with higher mental toughness (Guillaen & Laborde, 2014).

Another study showed that the learning capability is positively related to mental toughness of the students (Hardy III, Imose, & Day, 2014). Another investigation involving 482 athletes (male n = 305;
female n = 177), aged between 16 and 45 years (M age = 20.44 years, SD = 3.98) showed that mental toughness was associated with stress intensity. Total mental toughness was associated with more problem-focused coping, but less emotion-focused. (Kaiseler et al., 2009).

Balaji and Jesudass (2011) studied 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 (Jesudass & Balaji, 2011).

Newland and colleagues carried out a study to understand the relationship between mental toughness and performance in a group of
197 basketball players comprising of both genders. It was interpreted from their study that performance in some measure is predictable on the basis of mental toughness. Fairer sex showed lesser mental toughness than their counterparts in this study. The results indicated that there is a significant difference between individual athletes, team athletes, and non-athletes in mental toughness, social skills, and personality dimensions. It can be concluded from the results that personality characteristics of individual and team athletes are different from non-athletes. (Newland, Newton, Finch, Harbke, & Podlog, 2013).

Nicholls and co-workers showed that in a group of 677 athletes in the range of 15-58 years, mental toughness correlated significantly with coping and optimism. These findings are important for the people working in the field of sport psychology and training (Nicholls, Polman, Levy, & Backhouse, 2008).

The same group came up with more observations in 2009 again and noted that gender along with age and experience does play a role in defining the extent of mental toughness (Nicholls, Polman, Levy, & Backhouse, 2009). 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, Intentional 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 (Bhambri, Dhillon, & Sahni, 2005). It was also reported that once mental toughness had been developed, three perceived underlying mechanisms were required to maintain this construct: a desire and motivation to succeed that was insatiable and internalized, a support network that included sporting and non-sporting personnel, and effective use of basic and advanced psychological skills. Practical implications and future avenues of research are discussed. Shackell and Standing (2007) studied mental training alone can produce a gain in muscular strength.
Thirty male university athletes, including football, basketball and rugby players, were randomly assigned to perform mental training of their hip flexor muscles, to use weight machines to physically exercise their hip flexors, or to form a control group which received neither mental nor physical training. The hip strength of each group was measured before and after training. Physical strength was increased by 24% through mental practice (p = .008). Strength was also increased through physical training, by 28%, but did not change significantly in the control condition. The strength gain was greatest among the football players given mental training. Mental and physical training produced similar decreases in heart rate, and both yielded a marginal reduction in systolic blood pressure (Shackell & Standing, 2007).

Nicholls et al. (2009) studied mental toughness in sport: Achievement level, gender, age, experience, and sport type differences. It was hypothesized that there would be significant differences in mental toughness among athletes of different: (a) achievement level, (b) gender, (c) age, (d) sporting experience, and (e) sport type (team vs. individual and contact vs. non-contact sports). Participants were 677 athletes and consisted of sports performers competing at international (n = 60), national (n = 99), county (n =
198), club/university (n = 289), and beginner (n = 31) levels. Results revealed a significant relationship between mental toughness and gender, age, and sporting experience. However, achievement level and the type of sport an athlete participated in was not significantly associated with mental toughness (Nicholls et al., 2009). 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. The results indicated that there is a significant difference between individual athletes, team athletes, and non-athletes in mental toughness, social skills, and personality dimensions. It can be concluded from the results that personality characteristics of individual and team athletes are different from non-athletes (Kuan & Roy, 2007).

Salehian et al. (2014) studied the elite and non-elite athletic boys in individual sport fields of region13 of Islamic Azad University. The present study is of a descriptive-applied based research that has been carried out in a standard way. The data collection instrument was a questionnaire based on the southern Australia sport institution evaluation center that every ten questions measure one of the mental skills as following: motivation, concentration, and self-confidence, adjustment of energy level, mental picture-making process and target-based affair. The statistical sample of these elite athletes was about 40 ones and 40 athletes among non-elite athletes that they were accidentally taken up among the boy students of individual sport fields of badminton, table-tennis, taekwondo, Judo, running, chess, karate and wrestling participated in
the Islamic Azad University of district 13 in student sport tournaments. T independent inferential test was applied in order to analyze the related data for comparing the groups’ mean at p<-0.05 level. The results of the study indicated that the degree of motivation, self-confidence, concentration, and adjustment of energy level, mental picture-making and targeting skills is higher in elite athletic boy students in compare to non-elite ones (Salehian et al., 2014).

Mental toughness therefore is a state of mind which is capable of dealing with fierce competitive environment in sports when the term is being considered in sports arena. Age, experience, training and skill development by vigorous practice are some of the factors contributing towards mental toughness of an individual (Hardy III et al., 2014). A better understanding of the mental frame of sports persons gives the insight into their psychology.

**2.4 SPORTS COMPETITION ANXIETY**

Nervousness and tension experienced by an individual due to demanding environment or surrounding circumstances is called as anxiety. These situations are so often stressful and create an imbalance between the burden of performance and the capacity of an athlete with respect to physical fitness, mental toughness and skills
(Gould, Greenleaf, & Krane, 2002). Anxiety is an emotion experienced by an individual in case of testing situations and related expectations. In sports competition when similar mental stressed is experienced by the players it is called as sports competition anxiety.

Nowadays sports competition are becoming more and more challenging and at the same time the expectation and demand of performance from the team and individual players has also tremendously increased without any consideration of skills and abilities of the players. Such situation has lead to metal pressure and stress and the players find themselves under great pressure. During competitions this stress is intensifed and leads to sports competition anxiety. Mostly higher anxiety levels destroy the confidence of the players and cause a negative effect on the performance of players and results of competition.

In recent times, sports are also being considered as serious career choice. Parents enroll their child in sports academies, schools and colleges also pay attention towards sports activities and provide training to students. The students participate in sports competitions at various levels. As the level of competition goes on increasing, sports persons find themselves under more and more stress. Regrettably,
unrealistic hopes put the athletes under stress as they are desperate to live up to the expectations of their parents, peers and coaches. Many researchers have worked in this area and they tried to find out the major factors causing anxiety during sports competitions.

Behroz and colleagues have found out that when skills and self-confidence is higher, anxiety is very low. An increase in mental skills was found to be accompanied by an increase in state self-confidence amongst the group of 72 endurance runners and 72 sprint runners. These findings are in accordance with the findings of (Fletcher & Hanton, 2001), as well who have noted that there is a negative relationship between anxiety and performance. Kumar and Kumar (2012) studied to compare and assess the Tae Kwondo players of Delhi University and Delhi Schools, who has obtained position at Zonal and inter-Zonal or participated in National Scholl Games (SGFI), Inter-College, Inter University in their respective sports competition on selected physiological and psychophysical parameters such as Body Mouth temperature, Heart rate, Breathing rate, Vital capacity, Force full exhalation or Peak flow ability, Mental Toughness, Psychomotor Ability (DBDA-PM) and Competitive sports Anxiety (SCAT) between the players of Tae Kwondo at college and
school level. For the purpose of the study total 60 Tae Kwondo players 30 each at college and school level has been selected on purposively and randomly basis, who has won medal/ position in Delhi Schools Zone, Inter-Zone, Inter college, Inter University and participated in Delhi School, National School Games or Inter College or Inter University during the 2010 and 2011. All the subjects were regularly practicing and competing in their respective sports competition in various training centres at Delhi. To find out the difference and trends between Tae Kwondo players of Delhi Colleges and Delhi Schools on their selected Physiological and Psychophysical variables the required statistical calculation were computed with the help of SPSS software in the computer. The difference among all the selected variables, the data were collected and analyzed using the descriptive statistics and „t“ test and ANOVA. The level of significance was set at .05 level. When a two tailed equal group statistical significance mean comparison „t“ test and „F“ tests were employed on both the set of data of Tae Kwondo players on selected variables, the result found significantly different as evident in results in majority of the variables (Kumar & Kumar, ). These finding also showed that anxiety levels were different before and after the
competition in all the participants. It is important to note that in these two groups of endurance runners and sprint runners, all the individuals were skilled enough to cope up with competitive conditions.

The results also showed that there was hardly any difference between sprint and endurance runners in their levels of mental skills. Mental skills do play pivotal role in sports and they do have negative effect on anxiety. If a player is more skilled, the anxiety levels are low during the competition (Orlick & Partington, 1988). Psychological efforts to enhance athletic performance have gained importance after an understanding about the relationship between anxiety and performance. Evaluation of data has led to development of clinical methods to improve the mental health of athletes and training sessions also contribute in increasing the confidence of these players. Thus, an individual is shaped into a highly skilled and mentally ready to face the stress experienced during fierce competitive environments (Whelan, Mahoney, & Meyers, 1991).

Trudeau and Shephard (2005) studied the Contribution of School Programmes to Physical Activity Levels and Attitudes in Children and Adults. Although children and youth currently form the
most active segments of the population in developed societies, there is a marked trend toward an increase in sedentary lifestyle among school-age children. The purpose of this review is to analyse the effects of school physical education (PE) programmes on: (i) the physical activity (PA) levels of participants as children and adults; and (ii) attitudes toward PE and PA in the same groups. Based on the literature analysed, it can be suggested that a sufficient quantity of a quality PE programme can contribute significantly to the overall amount of moderate-to-intense PA of the school-age child. Schools also have the potential to influence the habitual PA of children by encouraging increased participation in extracurricular sports activities, by favoring active commuting to school and by providing exercise equipment and supervision for youth in their neighborhoods. Most young children have a very positive attitude towards PE. However, as they grow older, their perception of PE as a positive experience seems to become more ambiguous. From the few studies available, it seems likely that quality PE programmes help to maintain initial positive perceptions. Future research should address factors influencing the change of perceptions as a child matures. In addition to offering a quality PE programme, schools should ensure that the total weekly
amount of PE is sufficient not only to maintain but also to enhance a child’s physical fitness. More research is needed to determine the ability of school PE programmes to influence PA behaviour in adult life and to evaluate strategies that will make optimal use of the curricular time allocated to PE (Trudeau & Shephard, 2005).

In one more investigation to assess anxiety, 54 males and 54 females players from 3 different schools of Kudat district were asked to fill the questionnaire. These students were hockey players and their age ranged from 14 to 17 years (Dominikus, Fauzee, Abdullah, Meesin, & Choosakul, 2009). Statistic Package of Social Sciences (SPSS) version 16.0 was used to analyse all the data obtained in the study. Independent T-test was used to differentiate the mean on the directionality of anxiety interpretation and mental skills between male and female athletes. Pearson’s Product moment of correlation was used to measure the relationship between mental skills and directionality of anxiety interpretation/self confidence. This study found that there is a relationship between mental skills and the directionality of anxiety interpretation in players irrespective of their gender. The players with better skills showed lower anxiety levels.
Ali et al. (2010) Anxiety is an arousal state of mind which has both negative and positive effects on sports performance. The purpose of the study was to compare the level of anxiety between male and female national weight lifters of Manipur. Forty (40) weight lifters (male = 20, female = 20) who have participated in the national championships were taken as the subjects. The age of the subjects ranged from 17 to 25 years. To find out their level of anxiety, Sports Competition Anxiety Test (SCAT) developed by Martens (1977) was administered on the subjects. T-test was used to analyze the data. Results of the study revealed no significant difference between male and female national weight lifters of Manipur with regard to sports competition anxiety (Ali, Rahaman, & Khan, 2010). In another study relationship between sport orientation and competitive anxiety in elite athletes in Fars province was explore with a group of 688 subjects selected by systematic sampling. Regression analysis indicated that sport orientation affected competitive anxiety. Competitiveness and goal-oriented approach had inverse effect on competitive anxiety (Jamshidi, Hossien, Sajadi, Safari, & Zare, 2011).

Anxiety levels of physical education and sports students were studied in another investigation involving a group of 209 students
studying in the Departments of Physical Education and Sports Teaching and Coaching Education. The data analysis on SPSS 17.0 gave insignificant difference was found between the trait anxiety levels of students in terms of their gender and status of doing sports regularly (Kaya, Sari, Tolukan, & Gaelle, 2014). Levels of goal orientation, attention styles and anxiety towards the performance of the 80 Junior Golfers in Malaysia were examined. Competitive State Anxiety Inventory-2 (CSAI-2) was used to measure anxiety levels. Moderate anxiety levels were indicated in the study while the confidence level was considerable among all the golfers (Majzub & Muhammad, 2010). Sports Competition Anxiety is therefore an important variable which plays deciding role in the stability of athletes and sports persons and it has direct implication on the performance of the individual and team. If anxiety goes beyond reasonable levels, it leads to bad performance and failures in competitions.
2.4 REFERENCE LIST


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