CHAPTER II

REVIEW OF RELATED LITERATURE

The investigator has gone through the previous research related literatures which are closely related studies, the design of the study, procedure, instrument used and the sampling methods and statistical techniques employed in aspect of complex training with core exercise programme on selected bio motor ability, physiological and skill related performance variables have been published. The research scholar has attempted in this chapter to project the related literature of this study under three heading.

1. Review of related literature to bio motor ability variables
2. Review of related literature to physiological variables
3. Review of related literature to skill related performance variables

Review of related literature to bio motor ability variables

Das et al., (2014) investigated the fact about the influence of complex training with core exercise programme on agility among soccer players. To achieve the purpose of the study the researcher had selected sixty intercollegiate Soccer players at random and divided into four equal groups namely experimental group ‘A’ underwent complex training (CTG), experimental group ‘B’ underwent core exercise programme (CEPG), experimental group ‘C’ underwent complex training with core exercise programme (CTCEPG) and control group (CG) did not participated in any of the training programme other than their regular activities. The result of the study revealed after the completion of twelve weeks of training period that the CTG, CEPG and CTCEPG were
significantly improved in agility when compared with control group at 0.05 level of confidence interval.

**Manjo et al., (2010)** conducted a study that the short term effect of Complex and Contrast training on vertical jump, sprint and agility among elite Soccer players. To achieve the purpose of study twenty three elite Portuguese soccer player were selected at random (age ranged from 17.6 ± 0.6 years). The selected subject were divided into two experimental group (G₁ n=9 and G₂ n = 8). And one control group (G₃ n=6). G₁ and G₂ group have done their regular soccer training along with a six week strength training programme. The load was increased by 5% from 1 repetition maximum each two weeks. The result of the study showed reduction in sprint times (P<0.05) and increased on squat & Jump (P<0.05) in favor of G₁ and G₂.

**Shaikh & Mallick (2012)** did study on the effect of plyometric training and weight training on selected motor ability components among University male students. For the purpose of the study the investigator selected sixty male students at random from different colleges and their age between 19-25 years. The selected subjects were divided into three groups. Experimental group one underwent weight training programme (WTG), Experimental group two underwent Plyometric training (PTG) and control group (CG) did not participated in any of the training programme. After the completion of eight week training programme the investigator found that the experimental group significantly improved in speed, explosive power, muscular endurance and agility when compared with control group at 0.05 level of confidence.

**Jhonson et al., (2013)** made study on the effect of specific two types of exercise sequence in resistance training on strength Speed and agility in high school football players. Thirty nine adolescent football players were selected at random. Manipulating training
programme. The result of the study clearly showed that both traditional resistance method (TRAD) and circuit resistance method (CIRC) were significantly improved strength, speed and agility after the end of resistance training exercise sequence protocol.

**Arazi et al., (2012)** conducted a study comparative effect of land and aquatic-based plyometric training on Jumping ability and agility of young basketball players. To achieve the goal of the study eighteen young basketball players (age 18.81 ± 1.46 years) were randomly assigned to aquatic plyometric training (AP), land Plyometric training (LP) and control group (CG). The training period was for eight weeks. After the 8-weeks of training period the study showed the significant improvement in post-test of the experimental group when compared with the pre-test at (P<0.05) whereas control group showed no significant differences between pre-test and post-test in jumping performance and agility.

**Abdi&Sadeshi (2012)** published an article in the conference regarding the effect of eight week core stability training programme on the dynamic balance. To achieve the view of the study with in limitation and delimitation of the study the investigator selected 15 football players, 19 to 24 years in FC Tehran Damash with mean age 21.10 ± 1.25 years, height 179.53 ±6.83, weight 71.80 ±7.42 Kg, body mass index 22.23 ±1.27 kg/m² and a maximum vertical Jump was 51.66 ±5.58 cm. The result of the study indicated a high level significant progress in dynamic balance after the 8-weeks of core stability training programme at 0.05 level of confidence interval.

**Mahmoud et al., (2012)** their vision of the study was to find out the effect of balancing and resistive selected exercise on young footballers dynamic balance. To achieve the vision of this study the investigator selected 36 young footballers (age 18.22 ±0.83, height 173 ±5.73 cm,
weight 62.1 ±6.88) participated and divided randomly in three groups of experimental 1 (resistive), experimental 2 (balancing) and control group. Descriptive statistic, ANOVA and Turkey post hoc test in significant level of (P<0.05) were utilized for statistical analysis. The result of the study confirmed that experimental treatment had significant influence on dynamic balance of experimental groups.

**Gregory et al., (2006)** conducted a study to examine the effect of plyometric vs dynamic stabilization and balance training programme on power, balance and landing force in female athletes. To test the plane the sports scientist selected 19 female athletes from a Cincinnati area high school participated in this study. All the subjects were randomized into two groups. One group performed a protocol that involved maximum effort plyometric training (PLYO), while the second group performed a protocol that focus on dynamic stabilization balance training (BAL). The result of the study indicated that both PLYO and BAL training are effective at increasing measure of neuromuscular power and control.

**Khodabakshi et al., (2012)** their main focus of the study was to find out the impact of six weeks strength exercises on static and dynamic balance of young male athletes. To test the hypothesis of the study the investigator selected thirty 15-17 young male athletes with mean and SD (62.79 ±3.62 kg ∞ 171.1 ±4.46 cm) were divided into two groups 15 subjects for each group. They used SEBT and Romberg adjusted balance test before and after the exercise programme. The result of the study revealed a significant increase in static and dynamic balance in the group (P=0.001).

**Kagitha& Kumar (2013)** evaluated the effect of complex training with yogic practices on selected motor fitness variables and playing ability among Kabaddi men players. To achieve
the desire of the project the investigator had selected 60 Kabaddi players at random as a subject and were divided into three group’s equally namely Complex training (CTG), complex training with yogic practices (CTYPG) and control group (CG). After the twelve weeks of training period the result of the study found positive improvement on speed, agility, flexibility, explosive power, muscular endurance, coordination and playing ability in case of CTG and CTYPG when compared with CG at 0.05 level of confidence.

Ozer et al., (2011) examined the effect of rope or weight rope jump training on strength, coordination and proprioception in adolescent female Volley ball players. To test the objective of the study the investigator divided the selected subject into three groups namely weight rope training group (WRTG) [n=9, 15± 1 years], Rope training group (RTG) [n=9, 14.1±1.3 years] and control group (CG) [n=9, 14.1±1.3 years]. After the completion of twelve weeks of exercise period the investigator found that there is significant improvement in strength, motor coordination and proprioception among WRTG and RTG (P<0.05).

Ozer et al., (2012) conducted a study effect of calisthenics and pilates exercises on coordination and proprioception in adult women. To achieve the target of the study the investigator selected healthy sedentary female participants age 25-50 years at random and divided in to three groups namely calisthenics exercise group (n=34, mean age ± SD 40 ± 8 years, BMI 31.04 ± 41.83 kg/m²), a Pilates exercise group (n=32, mean age ± SD 37± 8 years, BMI 31.04 ± 4.83 kg/m²) and control group (n=41, 41±7 years, BMI 27.09 ± 4.77 kg/m²). The result of the study determined that the coordination was significantly improved due to the influence of calisthenics exercise and pilates exercise (P<0.05).
Bhayani & Singaravelan (2012) investigated the beneficial effectiveness of core stability training on improving task specific physical activity in developmental coordination disorder children. Thirty subject participated [14 female and 13 males] aged 6 to 16 years with clinical diagnosis of developmental coordination disorder. After the six weeks of training programme the result of the study indicated that the core stability training programme improves coordination, strength, balance, speed and also improve the task specific physical activity.

Santos & Janeria (2008) evaluated the effect of complex training on explosive strength in adolescent male basketball players. For the purpose of evaluation the investigator selected 25 young male athletes, age 14-15 years old and divided into two groups namely experimental group [EG ; n=15], Control group [CG ; n=10]. After the completion of 10 weeks of season training programme. The investigator explored that the EG significantly improved in squat Jump [SJ], counter movement Jump [CMJ], Abalakov test [ABA], depth Jump [DJ], mechanical power [MP] and Medicine ball throw [MBT] (P<0.05), whereas CG significantly decrease the values (P<0.05) of CMJ, ABA and MP. Hence the investigator suggested that the Complex training improves the upper and lower body explosivity levels in young basketball players.

Rajamohanet al., (2010) conducted an investigation to determine the effect of complex and contrast resistance plyometric training on selected strength and power parameters. For these purpose the investigator selected 30 young male athletes, age 19-21 years. They were grouped into two 15 subject each group. Group 1 served as complex training and Group 2 served as Contrast training. Hence their result reported that complex training and contrast training significantly improves the strength and power parameters at 0.05 level of confidence.
Shinkle et al., (2012) thought that the development of core strength can transfer forces from the lower to the upper extremities. They highlighted thought the investigation of the study to know the effect of core strength on the measure of power in the extremities. To run the study the investigator selected 25 football players performed medicine ball throw in static and dynamic position. Thus the result of the study indicated that the core strength does have a significant effect on an athlete’s ability to create and transfer force.

Sadeghi et al., (2013) investigated the effect of six week plyometric and core stability exercises on performance of male athletes 11-14 years. For the above statement of the problem the researcher selected 36 male athletes (11-14 years old) participated in the semi experimental study. They randomly divided into three groups namely core stability exercise group [CSEG: n=12], plyometric exercise group [PEG: n=12] and control group [CG: n=12]. Therefore the result of the study reveal after the expiry of training period that the CSEG and PEG on standing broad jump, Vertical jump, sprint, shuttle run, sit medicine ball toss test and sit and reach was significantly improved than the pretest (P<0.05).

Kwang-Jun Kim (2010) evaluated the effect of 12 weeks combined training in core muscle strengthening on the flexibility, muscular strength and driver shot performance of the core body parts of the female professional golfers. Subject was divided into two groups (of whom 9 belong to the training and 8 belonged to the control group). The result of the study determined that the 12 weeks of combined core muscle training had positive effects on flexibility and strength of core muscles. More ever it was effective in enhancing driver shot performance in female professional golfer.
Andrejic (2010) did a study to compare the effect of two short term off season conditioning training programme on fitness performance in young basketball players. To move forward for achieving the objective of the above problem the investigator selected 21 young basketball players, aged 12-13 years, volunteered to participate in this study. The selected participant were randomly assigned to a strength training group (ST, n=10) or a combined Plyometric and strength training group (CT, n=11). Young basketball player were tested before and after a six weeks training period. Result of the study observed that the ST and CT have greater improvement in posttest of vertical jump, long jump, medicine ball toss, sprint, start running and stand and reach flexibility than pretest (P<0.05).

Chandralekha&Jothi (2013) conducted a study related to the influence of swiss ball training on selected physical fitness variables among football players. To conduct the study the researcher had selected 20 male footballers [aged 18 to 25 years] as experimental group. Experimental group underwent 8 weeks of Swiss ball exercises training program. The finding of the study showed that the experimental group post-test is significantly improved than pre-test in abdominal muscular strength and flexibility at 0.05 level of confidence.

Azeem&Ameer (2010) conducted a study related to the effect of weight training on sprinting performance flexibility and strength. Researcher had selected 20 students. A 45 minutes weight training [WT] schedule twice a week for 12 weeks was administered. The study had enlighten that WT improved strength, speed and flexibility from pre-test to post-test [P<0.05].

Manickam&Muthukumar (2013) conducted a study on Isolated plyometric training and weight training on leg strength and explosive power. For their intention they selected subject age ranged from 17 to 22 years. They were divided into three groups each group consist of 15
subjects, in which group I underwent plyometric training [PTG], group II underwent combination of plyometric and weight training [PWTG] and group III act as control group. The training period fixed for three days in a week for twelve weeks. The result of the study yield that the PTG and PWTG were significantly improved on selected criterion variables such as leg strength and explosive power when compared with control group at 0.05 level.

Inqle et al., (2006) Conducted a study related to the effect of a Complex training and detraining programme on selected strength and power variables in early Pubertal boys. To achieve the purpose of the study 54 male participated for their study aged 12.3 ±0.3 years, height 1.57± 0.07 m, body mass 50.3±11.0 kg. Participants were randomly assigned to an experimental group [EG: n=33] or Control group [CG: n=21]. The training was given for 3 times for twelve weeks. After training the participants completed 12 weeks of detraining. Whereas the result of the study revealed after the completion of training period improvement in anaerobic power, Jumping, throwing, sprinting performance and improvement in dynamic strength due to the effect of complex training in EG group [P<0.05]. However after the detraining complex training are lost similar rates to the other modalities.

Sankarmaniet al., (2012) investigated the effectiveness of plyometric and weight training in anaerobic power and muscles strength in female athletes. To conduct the study the investigator selected forty intercollegiate athletes and assigned to two training groups randomly: Plyometric weight training [PWT] and weight training [WT]. PWT and WT completed 6 weeks of training program. The result of the study out comes with that PWT and WT is more effective in improving vertical jump, 50 yard dash and 1 RM squat performance in athletes than the WT alone.
Yaoo& Lee (2012) investigated the effect of core stabilization exercise using a sling on pain and muscles strength of patients with chronic back pain. To achieve the above statement the researcher selected 30 chronic low back pain patients were divided randomly into two exercise groups. One group under gone for core stabilization exercises using sling (n=15) and the other group undergone for mat exercise group (n=15). The exercise programme performed 3 days per week for 4 week. The result of the study determined that the sling exercise programme and mat exercise programme reduced chronic low back pain and improved muscle strength.

Sekendiz et al., (2010) did a study on the effect of Swiss ball core strengthening on strength, endurance flexibility and balance in sedentary women [n=21; age 34±8.09; height 1.63±6.91cm; weight 64±8.69kg] trained for 45 minutes, 3 days weeks for 12 weeks. The result of the study showed the fact that the swiss ball core strengthening exercise significantly improved muscular strength, muscular endurance, flexibility and balance.

Shahidi et al., (2012) examined the effect of two resistance training types on muscles fitness and anaerobic capacity in 16-18 years old soccer players. The research was quasi experimental. Thirty soccer players were selected as samples. The selected samples were divided into three groups, two experimental group [EG] and one control group [CG]. EG ‘A’ 17.19±0.73 years, 59.49±9.82kg, 171.50±6.93 ; EG ‘B’ 17.10±0.55 years, 56.32±6.75kg, 172.10±6.13cm; CG 17.40±0.42 years, 52.64±4.41kg, 170.10±6.93. EG performed the selected exercises along with technical soccer exercise, while CG only performed technical soccer exercises for 8 weeks. The result of the study yield that the EG ‘A’ and EG ‘B’ resistance training is probably effective for improving lower body explosive power, lower body muscles endurance, running speed, maximum lower body strength and abdominal muscles endurance.
Tan (2010) the main focus of the study was the role of resistance training in distance running. After the reviewing the articles on resistance training the investigator explore that the resistance training improve VO₂ max, lactate threshold and running economy. Running economy shown to improve significantly post resistance training possible due to neuromuscular changes including a shortening of the stretch-shortening cycle and an increase in muscles stiffness.

Patra & Kumar (2013) studied the effect of core stabilization training on endurance of trunk extensor and functional capacity in subject with low back pain. A total 30 subject [male: 14, female: 16] were divided in two groups. Group ‘A’ core stabilization and endurance training [CSETG] and group ‘B’ endurance training [ETG]. The total duration of protocol was six weeks and frequency of exercise performed is three times week. Therefore the study reported that the CSETG and ETG significantly improvement made when comparison made with [P=0.01] the groups for both trunk extensor endurance test and functional capacity.

Ilyararay & Sakthigananvel (2013) conducted a study related to the effect of combination of speed and plyometric training on speed and agility. To achieve the purpose of the study the investigator selected 30 healthy male hand ball players with age of 19 to 23 years were randomly allocated into a combination of speed and plyometric training. The selected subject were divided into two groups of 15 each group namely experimental group I and control group II. The finding of the study revealed that there is beneficial effect on speed and agility for experimental group when compared with control group at 0.05 level of confidence.

Balaji & Murugavel (2013) investigated the motor fitness parameters responses to Core strength training [CST] on hand ball players. Experimental group [EG: age 18-25 years, n=15] and Control group [CG: 18-25 years, n=15]. EG was given training for the period of eight weeks
CST. The result of the investigation confirmed that CST significantly improved the speed, agility and upper body strength.

**Markovicet al., (2007)** conducted a study to determine the effect of sprint and plyometric training on muscles function and athletic performance. To induce the training programme the investigator selected male physical education student and assigned them randomly Sprint group [SG; n=30], Plyometric training group [PG; n=30] and Control group [CG; n=33]. The selected variables were measured prior to and after 10 weeks of training. Both SG and PG were trained 3 days a week. Whereas the result of the study observed that both SG and PG significantly improved maximal isometric squat strength, squat and counter movement jump height and power, drop jump performance from 30-cm height and three athletic performance test standing broad jump, 20m sprint and 20 yard shuttle run.

**Kotzamanidiset al., (2005)** investigated the effect of a combined high intensity strength and speed training program on the running and jumping ability of Soccer players. Investigator selected 35 individuals and divided into three groups. The first group [COM group, n=12] performed a combined resistance and speed training programme, Second group [n=11, STR group] performed the same resistance training without speed training. The third group was the control group [n=12, CON]. The result of the study yield that COM group performed significantly better than STR and CON groups in 30m dash, squat Jump and counter movement jump.

**Review of related literature to physiological variables**

**Vernoniqueet al., (2005)** observed the beneficial effect of resistance training on resting blood pressure in healthy sedentary adult. A comprehensive literature search with Medline
computerized data based was conducted and reference list of published articles and reviews on the topic checked. Hence the result of the study suggested that moderate intensity resistance training in not contraindicated, prevent high blood pressure and Combat high blood pressure.

**Gokula & Pushparajan (2014)** tested the efficiency of plyometric training [PT] and plyometric training parallel with closed kinetic chain resistance training programme [PTPCKCRT] on the development of selected physiological variables. Forty five subjects were selected [17-19 years] and divided into three groups PT, PTPCKCRT and CG. The result of the study indicated that systolic blood pressure, diastolic blood pressure and resting heart rate significantly developed due to the impact of PT and PTPCKCRT when compared with CG. It also shows that PTPCKCRT is better than PT.

**Arazi et al., (2013)** analyzed the effect of low [LPT], moderate [MPT] and high [HPT] plyometric exercises on the post- exercise systolic blood pressure [SBP], diastolic blood pressure [DBP] and heart rate [HR] in normotensive individual. Ten healthy normotensive men [age 2.1±0.9years; height 175.8±6cm and body mass 69.1±13.6kg] participated in the study. The result of the study revealed that there was no significant difference was found between post exercise SBP, DBP and HR when compared between LIT, MIT and HIT. It was concluded that plyometric exercises can reduce SBP, DBP and HR.

**Kanniyan & Syed (2013)** studied the effect of Complex training and Contrast training on the physiological and bio motor variables of men Soccer players. To achieve the purpose of the study the investigator selected 36 men players age group 18-25 years old and divided into three groups (n=12) equally. The duration of training was 10 weeks for all the three groups. The result of the study revealed that speed, muscular endurance, blood pressure and resting pulse rate
significant better improvement due to the effect of complex training group and contrast training group when compared with control group.

Dhivyalaxmi & Murugavel (2013) did study to find out the effect of asana and core training on breath holding time, VO₂ max and resting pulse rate of middle aged working women. The selected samples were divided into two groups. Experimental group [EG] underwent asana and core training programme where as control group [CG] did not participated in the training programme. The result of the study indicated that after the 8 weeks of training period EG significantly improved in breath holding time, VO₂ max and resting pulse rate.

Grieco et al., (2012) investigated the effect of combined resistance-plyometric training program on muscular strength, running economy and VO₂ peak in division I female soccer players. Fifteen division IA female football players [age 19.0±0.7 years; height 1.67±0.1m, weight 61.7±8.1kg]. The investigator noticed that after 10-weeks of training period occurred a significant increase in VO₂ peak [10.5%; P=0.008].

Manna et al., (2010) held an investigation to find out the effect of training on physiological and biochemical variables of soccer players of different age groups. The selected subject were divided into four groups (n=30). (i) Under 16 years [U16] (ii) under 19 years [U19] (iii) under 23 years [U23] (iv) seniors [SR]. The training period consist of aerobic, anaerobic and skill development. The result of the study revealed that due to the effect of training programme VO₂ max, anaerobic power, grip and back strength significantly increased at [P<0.05].

Valizadeh et al., (2013) scientifically evaluated the effect of combined training on bio motor abilities of active males. For the purpose of the study thirty two males were randomly
assigned to four groups. Strength training [S; N=7, 21.5 (±1.7) years], Endurance training [E: N=8, 20.7(±1.8) years], concurrent training [SE: N=8, 21.5(±1.6) years], control group [C: N=8, 20.75(±1.6) years]. The result of the study indicated that after the eight weeks of training period significantly improved in the criterion variables such as fat percentage, VO₂ max, speed, flexibility, one repetition maximum [1RM] leg press, 1RM shoulder press, 1RM bench press and 1RM squat due to the effect of S, E and SE.

Valizadeh et al., (2010) analyzed the effect of sequence order in combined training on maximal strength and aerobic capacity. For the purpose of the study 28 physically active male were randomly divided into three groups control group [C: n=8], Endurance training [E: n=10] and Concurrent training [SE: n=10]. After the expiry of the 8 weeks of training period the investigator explore that VO₂ max and muscular strength significantly improved due to the effect of E and SE.

Review of related literature to skill related performance variables

Haghigi et al., (2012) conducted a study that the effect of Plyometric versus resistance training on sprint and skill performance in young soccer players. The investigator has selected thirty elite soccer players as subject and selected subjects were randomly assigned to PT group (n=10 age: 19.1 ±1.7 years), RT group (n=10 age: 18.0±0.81) and control group (n=10 age: 18.8 ±1.5 years). The result of the study showed that the sprint performance and dribbling performance significantly improved after the PT and RT (P<0.05).

Madhankumar (2012) investigated the effect of continuous running [CR] and fartlek training [FT] on selected physical physiological and skill related variables of football players. The selected players were assigned to experimental group [EG 1 : n=15] [EG 2 : n=15] and
control group [CG: n=15]. EG1 performed CR and EG2 performed FT and CG did not participate any of the specific training programme. The result of the study indicated that experimental group significantly improved speed, agility, muscular endurance, cardiovascular endurance, resting pulse rate, systolic blood pressure, diastolic blood pressure and dribbling when compared with control group.

**Manoj&Thirumali (2011)** investigated the impact of specified football drills with and without relaxation on selected game skill variables among school level football players. The selected subject ware divided into two experimental group and one control group. The result of the study indicated that the experimental group namely football drills with relaxation technique and football drills without relaxation technique had significant improvement on selected skill related parameters such as passing, shooting and dribbling among school boys. There is no significant difference on improvement of selected skill related parameters between both the experimental groups.

**Muthu&Sunderamoorthy(2011)** Conducted study to determine the influence of specific skill training package on selected performance variables among Inter collegiate soccer players. The selected subjects were divided in to two group experimental group and control group. Experimental group underwent specific skill training package and control group did not participated in specific skill training package. The result of the study found significant differences between experimental group and control group on selected criterion variables namely passing ability and kicking ability. It found significant improvement on selected variables due to the influences of specific skill training package.
Radhakrishnan&Desingurajan (2013) conducted a study to found out the effect of aerobic [E₁], anaerobic [E₂] and skill training packages [E₃] on dribbling performance of university men soccer players. Eighty men were selected and divided into four equally groups E₁, E₂, E₃ and control group [CG]. All the groups under gone their respective training for 12 weeks. The investigator found that the E₁, E₂ and E₃ were significantly improved the dribbling performance than the control group.

Manolopoulos et al., (2006) investigated the effect of combined strength and kick coordination training on soccer kick biomechanics in amateur Soccer players. To achieve the purpose of the study the physical education & sports scientist selected 10 Amateur soccer players (age 19.19 ± 0.4 years, body mass 74.8 ± 9.1 Kg, height 177.4 ± 6.7 cm) constituted the experimental group (EG), whereas ten players (age 21.6 ± 1.3 years, weight 71.5±6.7 kg, height 175.2± 3.4 cm) served as control (CG). The EG followed a 10 week soccer specific training programme combining strength and techniques exercise. The result of the study showed that the strength exercises were particularly effective in improving of soccer kick performance (P<0.05).

Stray et al., (2006) enlighten the fact about the impact of a sling exercise training (SET) improves balance kicking velocity and torso stabilization strength in elite soccer player. The investigator selected 12 Norwegian 1st division soccer players and 9 players of similar performance level served as control group. The result of the study clearly showed that SET training improved static balance, reduce back pain and improved in kicking performance due to the effect of core stability training programme.

Young (2006) made brief review to identify the factors that contribute to the transfer of strength and power training to sports performance and to provide resistance training
performance. The brief review of articles yield that the general strength training might be beneficial for athletes to enhance the force generating capabilities of muscles, increase total body mass, reduce the risk of sports injuries and improve core stability, whereas combination of general and specific resistance training method can be develop all the neuro muscular factors contributing to sports skills requiring strength and power. Ultimately hypertrophy and general power exercise can enhance the sports performance.

**Yaggie & Campell (2006)** examined the effect of 4 weeks balance training [BT] on selected skills. For the purpose of the study the investigator selected 36 subject [age=22.7±2.10years; height =168.30±9.55cm; weight=71.5±16.40kg] were randomly placed into control group [CG; n=19] and experimental group [EG; n=17]. The result of the study revealed that the time on ball, shuttle run and vertical jump improved. Further it was revealed that BT improved the selected sports related activities performance.

**Miranda et al., (2013)** Verified the effect of 10-week Soccer training program on anthropometric, Psychological, technical skills and specific performance parameters in youth players. 30 young soccer players were evaluated two times along the experiment [i.e.,T₁ and T₂]. Therefore the result of the study revealed that the training lead to significant changes [P≤0.05] in the BMI, lean body mass, total mood disturbance, flexibility, slalom dribble and lob pass test, 30 and 50mtr time trail performance, running intensity at the lactate minimum test and anaerobic parameters of the running anaerobic sprint test.

**Wong et al., (2010)** tested the efficiency of 12 weeks on field combined strength and power training [CSPT] on physical performance among U-14 young soccer players. The selected players were assigned to experimental group [EG: n=28] and control group [CG: n=23]. EG
performed CSPT twice a week for twelve weeks. The result of the study enlighten that CSPT significantly improve vertical jump height, ball shooting speed, 10m and 30m sprint times, YO-YO intermittent endurance run and reduce submaximal running cost.

Aju (2006) investigated the effect of pranayama and aum meditation on selected physiological variables and skill performance among football players. To achieve the purpose of the study investigator selected 30 male football players their age ranged from 18-25 years and divided into two equal groups’ namely experimental group and control group. The experimental group under taken pranayama and aum meditation with regular exercise for twelve week and control group did not participated any of the training programme. The result of the study indicated that the vital capacity, respiratory rate, goal kicking for accuracy, passing for accuracy (ground), passing for accuracy (air), dribbling, Juggling – A (all parts of the body permitted, except hands or arms) and Juggling II (ball may not hit the same part of the body twice in succession) were significantly improved by the experimental treatment when compared with control group.

Marcellolaia et al., (2009) analyzed the articles related to physiological and performance effect of aerobic high intensity and speed endurance training in football. After analyzed the reviews the investigator concluded that high intensity and speed endurance are specifically improves physical, movement, technical and tactical demands of the game.

Garcia et al., (2013) analyzed the effect of variable practice on long distance shot at goal in football. Twenty seven male football players were selected [age 20.34±1.5 and 11.67±2.15 years of experience]. The result of the study indicated that training practices increase shot accuracy and shooting speed.
Xaviour (2010) did a study on effect of plyometric training on soccer techniques of Junior Players. The researcher had selected randomly 50 soccer players their age ranged from 13 to 18 years and the selected subject were divided into two groups experimental group [EG] and control group [CG]. The training was given for twelve weeks for experimental group. The result of the study indicated that EG significantly improved on selected variables such as goal kicking for accuracy, ground passing for accuracy, air passing for accuracy, dribbling, Juggling – I, Juggling – II and playing ability.