CHAPTER II

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A Critical Evaluation or Reviewing of Reference Material (Literature)

Several sports are played in the world. The main object of any sport is to entertain still in addition to it physical exercise takes place due to sports and it also accompanies the development of factors of physical fitness and health in general. And therefore due to this only sport has got important place in human life today.

There has been a research on many a subject present in the modern age and still it is being continued on. And only because of this quest it has been possible to make more and more progress of the subject concerned. There have been many researches on the subjects like physical education, sports and recreation and still are being made on. Due to this only this subject has been rapidly progressing. Many researchers in the world have made research on how much effect occurs on the factors of physical education and sports and physical sturdiness.

An attempt of study has been made to see the effect on the health related physical fitness and motor ability by playing this native sport Atya-Patya in the present research; yet the researcher has made use of the study of the available and essential reference literature concerned with his subject of research. While making the research on the relevant topic and those references are as follows:

Kondgire 19 (1998) studied the effects of the project of selective Lazim exercise being her subject treatise for M.Phil on the boys (age group 12 tp 14
(28 years) selective physical fitness ability. Two equal groups of 30-30 boys were made one group was experimental whereas another group was controlled group. Selected kinds of Lazim were executed as a training on the experimental group. Mid-test after 15 days and 30 days and post test after 45 days were taken after the training of pre-training of both the groups according to the index of AAHPERD test. Mean of the statistics, S.D. mean difference, standard error and T-value were used. Growth in the ability of the tests related to the boys' speed, muscular strength of stomach, explosive strength of the legs, directional knowledge, arms strength of shoulders and capability of respiration of heart was also seen.

Kerr decided the controlled group of the 36 students of the standard 5th and 6th only in the traditional physical education and the experimental group was given the circuit training with the combination of traditional physical education method and in this way he divided these two groups. Pre-training test and post training test were taken through the channel of AAHERD test. Training of circuit training was given along with the traditional physical education to the experimental group during the training time of fifteen minutes and the controlled group was given the traditional physical education for 35 minutes. All students were given the training of eight weeks for three days in a week. The collected information of pre-training tests and post training test was analyzed throughout the co-related T-test. A great improvement was recorded in the run test of nine minutes in the two groups of experimental and the controlled (p<0.05). A progress was seen in the sit ups-test of the students of experimental group. Later on the main treatment of grade level and the mutual reaction of there were analyzed through the channel of factorial $2 \times 2 \times 2$. A
NOVA. There was found a significant growth in the fifth standard boys ability in the running test of nine minutes (P<0.05). No. remarkable difference was found in the level of selected physical ability of the circuit training taken as per the schedule of modern physical education.

Renfrow 26 out of the ELE three schools' selected and selective IIInd and IVth grade students' help did research. Before training them their skinfold was measured, all students' height was measured as well as their foresight was calculated. The measurement of the factors of their physical fitness like 50 yard dash, high jump, shuttle run, elasticity test and 9 minutes running and walking etc. It was divided into two groups viz. one group of IIInd grade boys and second group of IVth standard boys. Consisting of all boys. The experimental group of IIInd grade boys was given the 12 minutes aerobic exercise every day for 21 weeks. After training their all factors physical fitness was again measured through those tests. The standardized academic achievement test of boys of the experimental group in the IV th standard was taken for measuring their educational progress. After analyzing the collected information improvement was found in the experimental groups' boys' bodies' percentage of fat and in the measurement of their high jump and physical elascity. No improvement was recorded in the ability of their respiration.

Kelly, 15 studied 209 boys' physical fitness coming from the age group of 9to 12 years through AAHPERD physical fitness Test. Their timely physical fitness was recorded through the test of one mile running / walking , pull ups , sit ups, elasticity and skin –fold. Alongwith it was told to fill up a permanent application. It was also engird there how many kinds of games it had and which games and how many times they were played daily. A form of collected
information and details it was analyzed and explained step by step. It was also made clear from the collected information of skin fold Test that there was a correlation between less skin fold test and the games played with the highest number. A great difference was found in the boys' elasticity. It also becomes clear from this study that the other criteria of tests affect the physical fitness of the demonstrators.

Das and Banerjee \(^7\), (1992) examined the effect on the working of Yuva foot – ball players through experiment during the change of training period. Training effects on the factors of working but in order to obtain the meaningful effect, how much proper duration should be was the main purpose of this research. Foot ball players i.e. 29 school going pupils belonging to the age group of 10-12 years were selected. They took the test of speed, strength, endurance, flexibility and foot – ball skills. Accordingly they were given the training of eight weeks. During their training period the above physical ability and skill tests were again taken. Simultaneously development in the factors directional sight, endurance, shooting, juggling and kicking was seen. But the maximum fruitful result was: Six weeks training was seen. Further growth was seen in all remaining factors after eight weeks. This study proves that in order to find out fruitful result of training minimum period of six weeks should be deputed.

Kadu \(^{14}\), studied the effects of the selected gymnastic game Kho-kho on the directional knowledge. The researcher selected the players of the age group 13 to 15 for his study casually. These players came from Shri Shivaji High-School, Amravati, forty Kho-kho players were divided into two groups i.e. the experimental and the controlled group. The training of the selected
programme of gymnastics of six weeks was given to the experimental group. Later on directional knowledge agility was measured through shuttle run and squat thrust. It is concluded from this there seems a fruitful result of the selected kind of exercise of the programme of Kho-kho on the directional knowledge / agility.

Wadman 31, (1970) studied the effects of circuit training programme on ladies Badminton skill of freshman college. After conducting their two Badminton skill tests. 26 ladies were divided into experimental group and twenty were divided into controlled group.

The experimental group was given the circuit training fourteen weeks, skill practice and suggestion. On the other hand the controlled group was given skills practice and instruction : A conclusion was drawn from the statistical analysis of the obtained figures. No fruitful result is seen on the Badminton skill of ladies of circuit training programme.

Sangral 28, (1992) did comparative study of the effects of six weeks intensive training programme of ladies volleyball players on their selective physiological and physical skill factors. After selecting 12 Volley-ball player in a casual and natural method their preliminary test was taken on the basis of physical fitness and skill tests. Afterwards they were given 6 weeks intensive training 6 times a week.

Their post test was taken after 6 weeks ‘T’ test was applied for the statistical data analysis. This showed a fruitful result in them in the form of physical ability right hand’s grip, strength of the back, and skill in Volley-ball but no fruitful difference was found. On other factors like 50 meter dash, left hand’s grip, leg’s strength and standing broad jump.
Khandare 17, (1998) studied the effects of 12-14 years group’s boys’ joints on their flexibility on the kind of exercise, “Lazim” and its training programme. Of Bharat Mata Ki Jay. He prepared two groups of 30-30 boys for it and they were known as the experimental group and the controlled group. The training programme of the exercise, "Lazim" known as Bharat Mata Ki Jay was implemented on the experimental group daily 10 minutes for 90 days. It was found that a difference in the elasticity of 12-14 years group’s boys joints after comparing their preliminary test with their post test was noted. The test of sit and reach was applied for measuring the flexibility. The increase in the flexibility of the students of experimental group was seen and noted.

Pawar 25 studied the effects of kho-kho girl player’s on their physical fitness. The girls on which this experiment was done in view of research belonged to co-educational and unieducation schools and out of them 20 students per school were selected. Those girls (pupils) belonged to the age group of 12 to 16 years. Co-educational school girls were given the training of the game of Kho-kho as an experiment with the company of boys. And the second group was given the training after participating with the girls. Their physical ability was tested through JCR after receiving pre and post training the above study drew a conclusion that the girls who were given the combined training with boys have increased their physical ability more than the group of girls with girls.

Roy 27, studied the effects of Yoga Asanas and Balastic physical dexterities studies on the physical fitness of collegiate students running Broad Jump. Thirty four teachers and students of 20 to 30 age group of Laxmibai National collage of physical education, Gwalior took part in the project of
research. Casually co-workers’ respondents were equally divided into two parts. The first trainees of the experimental group were given the training of five asanas of Yogaasna where as the second trainees were given the training of five kinds of physical dexterity of Ballistic exercises. After taking their test of duration during the training period (T-Test) good progress was clearly seen in the running broad Jump ability of both of the trainees of the experimental group.

Moulson Lishfield, studied the effects of 16 weeks’ physical fitness growth training on fire brigade staff’s physical fitness and on their physical fitness and on their physical structural measurements on and average 15 gents staffs of 33 of age group took part in the training programme of 4 months aerobic and weight lifting. The average age group of 9 members group for the research was 342. All staff’s Astrand – Rhyming – graded bicycle test, high jump, sit jumps, push ups, hand grip, lung function, evaluation, elasticity and body composition Analysis tests were taken twice before and after their training. Equal loss in systolic blood pressure and exercise HR of controlled and experiment group was recorded. But in the case of staff of the experimental group the improvement was seen in their physical fitness in general.

Modol and Banerjee, (1989) studied the effects of 6 weeks multigym conditioning programme on the foot-ball players of Yuva with the help of experiments. The main purpose of this experiment was to assess (evaluate) the effectiveness of this programme for the development of selective physical fitness and foot – ball skills casually players of average age limit 15 to 22 years were divided into two groups of 12 experimental and 10 controlled
group and for those players who were at Indian sports Authorization centre Kolkatta and who were trainees and for this programme. After the practice of their physical dexterity one hour per week three times was given the programme of Mutigym conditioning to the experimental group were as the controlled group was not given such type of training programme. T-test was applied for the statistical analysis. And from the above programme it was informed that there was a growth in the physical ability and skill of the players.

Burtake $^5$, (1983) studied the effect of Isotonic and Isokinetic training programme on the strength. For it 30 collegiate gents’ and ladies’ Knee – extension strength Isotonic, Isometric, Isokinetic strengths were measured by three methods. Afterwards they were divided into 15-15 two groups and the one group i.e. Isotonic concentric and the second group Isokinetic were given the training of eight weeks. Later on their post- test was taken. The technique of ANOVA was used for the statistical analysis. This proved that there was a fruitful growth in the Knee-extension strength in comparison with the students of the training programme group of Iso-kinetic and the training students of isotonic concentric group.

Kirk Patrick $^{18}$, (1982) observed the effects of resting and sub maximal dance training on the physical proportionateness of 20 collegiate students taking the training of Jazz dance. Various tests were taken for all these factors before and after 10 weeks training programme. After applying T- test of the collected information it was analysed. It was also observed that conspicuous loss was in the quantity of students’ physical fitness according to the drawn inference. No remarkable growth was seen in the resting and sub-maximal no difference was clearly seen in students’ aerobic ability except decreasing their
physical fitness after taking 10 days Jazz dance training at the end of this research.

Jamer ¹², (1987) studied the effects of weight training and plyometric training on the Vertical High Jump, vertical Long jump and 40 meter sprint. For this he divided those items into three equal groups by the casual method and took their pre-test with the help of the above three factors. Later on weight training was given to the one group and second group was given the training of plyometric and third group i.e. the controlled group was not given this types of training method. The total training of eight weeks was given Viz weight training three times per week and plyometric training two times per week was given. The inference was drawn two times per week from the statistical analysis of the obtained figures calculated from the post test of eight weeks that an improvement was found in the group of training by applying both the methods.

Bava Mukhopadhys, Choudhari and Devnath ², (2000) studied the effects of training programme related to 4 weeks gymnastics on the volley-ball players' physical ability and capacity of working. SAI Training Center, Kolkatta 27 gents volley-ball players undergoing the training physical Instructors were casually divided into the experimental. Group of 12 players and into the controlled group of 15 players and their various tests were taken in relation to their physical ability and duration of their sports and the experimental group was given the training of gymnastics for four weeks and the post – test of the both groups was taken after four weeks.

The factors of vertical jump push ups, chin ups, sit ups, back strength, 30 meter sprint, Boomrange test, 600 meter run, sit and reach, bridge up test
and shoulder rotation were included in the tests of physical ability where as
Arm pass with side Rolling and forward drive factors were included in the
technical method of working. Fruitful growth was seen in the experimental
groups' players' physical ability and working method.

Baladwin, evaluated the physical fitness of 34 students belonging to
the age group of 13 to 18 years and having the experience of aerobic dance
and coming from the North-East High School, Pennsylvania (U.S.A.). The
total period of training was 16 weeks each session consisting of fifty minutes
and five days per week was the duration. Twenty four students were excluded
from the project of research due to being absent more than three times and as
per the conditions already fixed. The controlled group was kept aloof from
aerobic dance and any other study of physical education.

The measurement of five ability factors: capability of heart respiration,
flexibility, muscular strength and the body composition was taken through the
tests of pre-training and post training. Five minutes astrand rhyming step test
taken for measuring ability sit and reach, one minute modified sit ups, hand
grip Dynameter test and skin fold measurement. Lange and skin fold caliper
test were taken. It was made clear after studying that remarkable growth was
seen in the muscular strength of the group of aerobic dancers. No remarkable
growth was seen in other factors.

Tape, studied the effects of physical dexterity on the physical fitness
of the pupils of the secondary high-school. An experiment was performed on
199 boys and girls (pupils) coming from the standard VII th and VIII th of north
side middle school by them. They studied the changes seen in secondary
school's students' physical fitness through the pre and post training tests. The
groups of tests also included the test of Battery sit Ups, shuttle run, one mile running/walking, pull ups, or Flexed armed hang and sit and reach, students were given the training of physical exercise for the whole academic school year.

It was also observed that a little (small) growth was seen in the physical ability through statistical analysis.

Sangral 28 (1992) did the comparative study of 6 weeks intensive training programme of women’s volley-ball players and their effects on the selective physical activities and their physical dexterity. 12 volley-ball players were casually selected and their pretest was taken through the basis of physical ability and skills tests. Later on they were given 9 weeks intensive training programme 6 times.

Their post-test was taken after 6 weeks ‘T’ test was applied for the statistical analysis. The fruitful difference was found out of their physical ability – right hands grip, strength of the back and volley-ball skill. But in the case of other factors. No fruitful difference was seen like 50 meter dash, left hands grip, legs’ strength and long jump while standing vertical jump.

Kumbhar 20, studied the effects of Surynamaskar on physical fitness of 12-14 years girls for M.Phil. degree. Sixty girls were selected for this experiment. Two equal groups of 30-30 girls were formed. The experimental group was given the training of Surynamaskar for 45 days. Tests before and after Surynamaskar were taken on behalf of AAHPERD test. During the training period of Surynamaskar tests after 15,30 and 45 days were taken. Co-inferences according to the ANOVA method of statistics were drawn. Strength in the muscles of arms and shoulder was seen.
Stoke \textsuperscript{29}, studied the effects of 10 weeks training programme of two kinds of physical dexterity: Racket ball and jogging on the various factors of Respiration ability. Twenty four college girls (students) belonging to the age group of 17 to 35 years took part in their study programme. Eight female students of the jogging group studied 3 days In a week 40 minutes per day schedule. They did the jogging practice with the intensity of 67 \% to 85 \% ability according to the measured formula: carvonen (THR). Through the running test on trademiller till fully being fatigued timing before and after the training of absolute and relative VO\textsubscript{2} (Max)VE (Max)HR. exchange ratio and treademill was recorded two times. After analyzing through ANOVA tradition the remarkable growth was clearly seen in the girls absolute VO\textsubscript{2} (Max) and 7.4 \% and VE (Max) 8.7\% remarkable growth was recorded i.e. VE (Max) and 6.8\% of the group of girls undergoing the training of racket ball. No remarkable or striking change was made clear in both groups girls HR, respiratory Exchange rate (change in the respiratory and treadmill time. A difference was found in the sedentary control of the girls of two groups of jogging and racket ball through turkey post Hoc test and the change between two groups girls absolute VO\textsubscript{2} (Max) and VE(Max) was made clear.

It was also proved that the exercise; ‘jogging’ has been very useful in increasing the pulse rate ability of the heart through research.

Joseph Mure, Tinkar and Walker \textsuperscript{23}, did research on the officers stressing on 100 laws. They gave the training of selective items of the selected ability. It was made compulsory. Six tests of 1.5 mile running/walking, skin thickness of three sports sitting elasticity test, Sit-Ups (one minute), bench press, leg press were taken.
The analysis of the required and the limited marks was done through ANOVA method and it was seen that a fruitful difference was found in VO$_2$ (minimum O$_2$) maximum stamina of working in its company (imminence) number of Sit-Ups, sitting and elasticity ratio, leg press. The quantity of fat in the body was fruitfully decreased. No fruitful difference was seen in the marks of bench press. This research has proved that fruitful progress can be brought into reality in the physical ability due to compulsory physical ability test programme.

Ganguli and Gharote $^{10}$, (1989) studied the effects of Yoga studies on the physical ability through their research. They concentrated on the various factors of physical elasticity and ability in their studies seventy trainees of the divisional police training centre of Khandala (Dist – Poona ) took part in the project of this research. All respondents were equally divided into two parts the controlled and the experimental groups on the basis of physical factors. The experimental group was given the training of Yogaasanas. The remarkable growth in the experimental groups trainees respiration ability was seen through the post test in the comparison with the instructors ability training of the controlled group on the other hand good improvement was seen in their physical elasticity.

Harper $^{11}$, selected twenty five Mahavidyalayan students and divided them into three groups (units) on the basis of ability of consumption (usage) of their oxygen. According to the modern military conditioning programme one group of eight and calisthenics and marching or parade training were given. Nine members of second group took part in the periodical training including running. The third controlled group spent time in entertaining programme. The
duration of training was seven weeks 5 days per week. The use of oxygen and Harward steps tests were taken after pre and post training of the students of three groups. According to the assessment (evaluation) periodically trained group showed a remarkable growth in Harward step test but no progress was seen in the use of oxygen.

Palmer 24, studied the effects of sports competitions and training before the competitions on the students physical ability. He applied twenty two kinds of tests for the factors of respiration capacity, flexibility, muscular strength, legs’ ability, quantity of fat in a body and its weight. During their period of competition nine students’ total three times factors of physical ability were measured. The first test before training in view of the preparation for competition was taken. After actual programme second test was taken and the final i.e. the third test was taken after the duration of the controlled competition. A remarkable growth in five factors out of six factors was seen in the first test of ANOVA with the repeated measurement in the second test too (P<0.05) Included the tests of 12 minutes running – respiration ability. Sit and reach (elasticity / flexibility), left shoulder extension (muscular ability ) and right shoulder flexion and extension (muscular ability).

Progress during the first and third tests was seen in nine factors. This includes the tests 12 minutes running / walking, sit and reach, shoulder extension (elasticity) right and left leg flexion (strength), right shoulder flexion and extension (muscular strength) right leg flexion and left leg extension. Progress was seen in left leg extension and right leg flexion factors during the trial of second and third tests.
Devnath ⁸, (1978) studied the defects of Suryanamaskar and weight training exercises on the kicking ability of foot-ball players through his experiment. Sixteen students of Gwalior Laxmibai National college of physical education took part in this experiment. After final observation there seemed no difference (change) at all in the students ability. No significant improvement was seen in the knees muscular flexibility of foot-ball players and in their kicking ability even through the two kinds training.

Dobie ⁹, studied the effects of fixing up certain programmes on Mahavidyalayan tennis players young girls’ peculiar tennis skill. And on their respiratory ability. Twenty two women tennis players were classified through Heavitt tennis achievement test. The students doing physical exercises twice or thrice in a week i.e. for a limited period in the factors of physical ability and activities (working capacity ). It was also clearly seen that they lacked subcutaneous adipose tissues. But much difference was not seen in their growth curve.

Choudhari ⁶, (1970) studied the effects of Suryanamaskar scientifically on the ability of sprinter athlete players. He included 23 gents – students of Gawalior, Laxmibai National College of physical education in the project of his research. By applying simple random method respondents were divided into two groups. Students of the experimental group were given the training of exercise of eight asanas of Suryanamaskars, but the second controlled group did not take part in any training programme.

During the period of researching various flexibility tests of all students joints of their bodies were taken. The final analysis proved a good improvement in the ability of the joints of the students of the experimental
group. This proves that the training of Suryanamaskars becomes very beneficial useful and fruitful for improving the ability of the players participating in various sprinting sports.

Gowin (1969) conducted a study by selecting Ss (n = 23) who participated in repeatedly maximum weight load programme. And 17 subject were placed in a 20 second timed circuit weight training groups. It has theorized that because the timed circuit programme utilizes least time and less resistance it could be an effective off season strength programme. The modified Roger’s physical fitness index test was used to measure strength. It was concluded that both weight training programmes improved strength aspect.

Roy 27, studied the effects of Asanas and ballistic exercise on the performance of running broad jump of college male students who were the teacher trainees of physical education. Thirty four subjects, age ranged from 20-30 years, from the L.N.C.P.E. (Laxmibai National Collage of physical Education), Gawaliior, participated in this study. The subjects were randomly assigned into two experimental group Viz., Expt. Gr.I and Expt.Gr.II. the subjects of Expt. Gr. I underwent training in five selected asans, where as the subjects of Expt. Gr.. II five ballistic exercises analogous to the asanas. The result of T-test revealed that both the experimental groups could improve the performance running broad jump.

Bera, Rajaprurkar and Ganguly 3, (1990) evaluated the effect of a one year yogic exercises training programme on body density and its selected substantiate variables. Fatfolds were taken from the triceps, subscapulor, post. Suprailliae, chin and midaxilliary sites by a lage caliper in 20
experimental and 20 control male subjects. Before and after one year progressive training regimen. Yogic exercise training consisted of 17 practices. ANCOVA revealed significant increments in body density and ideal body weight (P<0.01) for the experimental group as compared to the controlled group. However, significant gains in present body fat and absolute fat weight were observed in control group while compared with the experimental (P<0.01). The results demonstrate that the conventional Yogic exercise does 1) preferentially reduce the present body fat and absolute fat weight, and , 2) significantly increases the ideal body weight and body density.

Bava, Ganguly and Gharote, reviewed various research report and selected that Yogic practices help to reduce excess fat, blood cholesterol level and indicates positive effect in developing minimum muscular strength, cardio – respiratory endurance, flexibility of joints and physical fitness index. These are also the desired qualities of a sportsman of ecto-morphic body type having mesomorphic tendency. It is predicated on the basis of research review that the better performance in Yogic exercises may be facilitated by ectomorphis. Mesomorph body type.

Robert, (1968) studied the effect of varied weight training loads on the strength of university freshman. The purpose of this study was to investigate the effect of the following combinations of set and repetitions in a weight training programme on the acquisition of the strength. Training imparted was three groups of seven maximum repetitions (3x7 MR) and four groups of seven maximum (4x7 MR). The first group was trained solely on the
curl, bench press and squat. The result indicated that all groups registered strength gains, which was highly significant.

After taking the survey of the above research work it is understood that the researcher’s study of the sport ‘Atya-Patya’ selected for his research Effect of playing Atya-Patya on health related to fitness from 14 to 16 age group students is not totally and directly related. This marks clear that the chosen subject of the research by the researcher is wholly new and novel.

Therefore the researcher has chosen this subject of Indian Ancient sport i.e. Atya-Patya and its effect on the players' health related physical fitness for his Ph. D. in physical education.
References


