

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY OF THE STUDY

Sport is considered as a vital factor of Physical Education, and hence it has a global acceptance. It is unique in the sense that the constant organisation of sports activities and competitions take place across the world. Almost all the countries take part in such activities which is the primary reason for such a wide popularity and importance of sports within the globe. The world has acknowledged the historical presence and applicability of games or sports in all the civilisations. Sports is a worldwide attraction because of the choicest experiences and feelings that are found as an outcome of dramatic emotions like success, failure, exhaustion pain, relief and happiness. It provides human beings with different worldly resources like money, dignity, glory, position and recognition. However, it is equally subject to tragedy, grief, sorrow or death.

The present study was a kind of analytical research which uses experimental method. A random group design, which was experimental in nature, was implemented for this study. The sample of the study comprises forty (40) basketball players of Union Territory Chandigarh. Once the list of subject's age ranged from 15-18 year of the age was ready or prepared, the scholar, went through the health record of the subjects as maintained by the school to make certain that the subjects were medically fit undergo differing types of training programme. The first group was more divided as two totally different groups, i.e, Experimental group (N=30) and Control group (N=10). For an extended investigation of the SAQ and Strength training experimental group, the experimental group was sub-divided into three equal groups, each holding ten (10) players. Group I used to be given SAQ training, group II was acting on Strength training and group III was to undergo combine SAQ and Strength training group. While the last, IV group was the Control group. It was prohibited to indulge in any of the training programmes except for their routine practice. All the four groups were assessed (Pre-Test) on the basis of physiological, motor fitness and skill performance variables. They would be assessed (inter-mediate test) after 6 weeks training on physiological, motor fitness and skill performance variables. After this

assessment (inter-mediate Test), all the four groups were split up for different training/treatment for the period of 6 weeks. Once this training/treatment was completed, a post test on physiological, motor fitness and skill performance variables was conducted; whereby, the effects of treatment were noted. After transmuting the data into statistical analysis, the study was concluded.

Summarized findings of the study highlights that all selected physiological parameters included in the study, shows that 12 weeks specific training whether SAQ, strength training or combination of SAQ and strength training, significantly change among basketball players. On the other hand control group failed to show any significant change in physiological parameters of players. Motor fitness of players improved significantly with SAQ training, strength training as well as combination of SAQ and strength training. Motor fitness of control group players remained almost same even after training of 12 weeks. All training programmes SAQ, strength and combined SAQ and strength training help basketball players to sharpen their skill performance from their baseline status significantly.

In case of Physiological parameters SAQ training showed improvement in SBP, DBP and Resting Respiratory Rate whereas strength training helped in peak expiratory flow rate and combination of both SAQ and strength trainings improved Resting Pulse Rate. For improving motor fitness SAQ training help in flexibility and speed, on the other hand strength training improves strength, endurance and co-ordination among players. SAQ training sharpened the skill performance in field shoot test and Dribble test whereas combined SAQ and strength training help basketball throw accuracy of basketball players.

FINDINGS OF THE STUDY:

While considering the results of present study following findings were observed:

1. Effects of SAQ training on physiological variables among basketball players.

While analyzing and comparing mean by paired sample t-test significant impact of SAQ training was observed on physiological variables except Diastolic blood pressure in intermediate test. Comparison of intermediate results and post test results showing significant ($p < 0.05$) positive change in all parameters highlights the benefits of SAQ training for basketball players. Pre-test and post-test comparisons of physiological variables showed remarkably significant ($p < 0.01$) improvement in all the parameters after SAQ training among basketball players.

2. Effects of SAQ training on motor fitness variables among basketball players.

Motor fitness of players witnessed positive and significant ($p < 0.05$) impact even after intermediate SAQ training of players. Similarly application of paired sample t-test proves that intermediate and post test results had statistically significant mean differences in all variables related to motor fitness. Highly significant change was noticed in post test results compared to pre-test related to parameters of motor fitness.

3. Effects of SAQ training on skill performance variable among basketball players.

SAQ training significantly enhanced Skill performance of basketball players at the time of intermediate test. Significant improvement by advanced SAQ training of 6 weeks was noticed in all skill tests from intermediate to post test. Skill performance of basketball players get sharpened with SAQ training and significantly increased from pre-test to post-test according to paired t-test.

4. Effects of strength training on physiological variables among basketball players.

Strength training improves vital parameters of basketball players even after 6 week training at the intermediate level. Except Systolic Blood Pressure all vital parameters showed marked improvement with significant p-value by t-test comparison for paired sample. The 6 week advanced training further enhance capacity of players significantly ($p < 0.01$). The effect of strength training has been clearly depicted by pre-test and post-test comparisons of their vital parameters which was found to be statistically significant.

5. Effects of strength training on motor fitness variables among basketball players.

Motor fitness of basketball players showed positive and significant ($p < 0.05$) impact after strength training of 6 weeks in paired t-test. Continuing strength training for another 6 weeks helped players to perform better in terms of motor fitness in post-test. Post-test results of motor fitness tests compared to pre-test averages helps to understand how much beneficial is strength training for basketball players. Skill performance of players shows marked improvement, having $p < 0.01$) in t-test, by strength training in intermediate and post-test over pre-test.

6. Effects of strength training on skill performance variable among basketball players.

Skill performance of players shows marked improvement, having $p < 0.01$) in t-test, by strength training in intermediate and post-test over pre-test.

7. Effects of combine SAQ and strength training on physiological variables among basketball players.

Combined SAQ and strength training affected all parameters positively. While all other physiological parameters were found to be significantly improved only peak expiratory flow rate remained positive but statistically non-significant ($p > 0.05$) in the intermediate evaluation. But advanced training of 6 weeks helped to improve the PEFR of players significantly. Thus till the completion of training session all parameters vary significantly ($p < 0.01$) from the pre-training results proves paired sample t-test.

8. Effects of combined SAQ and strength training on motor fitness variables among basketball players.

Both combined SAQ and strength trainings given simultaneously enhanced the motor fitness of basketball players to the extent of significance ($p < 0.05$) in short training of 6 weeks. Further advanced training of 6 weeks improved flexibility, strength, endurance and co-ordination but speed of players could not be increased significantly. On the other hand statistically significant improved motor fitness was witnessed by comparing post-test averages to pre-test with paired sample t-test.

9. Effects of combine SAQ and strength training on skill performance variable among basketball players.

Dribble applied to assess skill performance of players showed minor but non-significant ($p > 0.05$) improvement as a result of combined SAQ and strength training in intermediate results but over a time of 12 weeks it behaved similar to other skill performance tests and significant improvement was noticed.

CONCLUSION:

On the basis of finding of the study following conclusion were drawn:

1. Significant impact of 12 week SAQ training was observed on physiological variables i.e Resting pulse rate, Systolic blood pressure, Resting respiratory rate and Peak expiratory flow rate except Diastolic blood pressure in intermediate-

test(after test 6 week) from pre-test. While comparing intermediate results with post-test results after 6 week training significant positive change in all parameters highlights the benefits of SAQ training for basketball players. Pre-test and post-test after 12 week training comparisons of physiological variables showed remarkably significant improvement in all the parameters after SAQ training among basketball players.

2. Motor fitness of players witnessed positive and significant impact from pre-test even after intermediate-test after 6 week SAQ training of players. Similarly intermediate and post test results showed statistically significant mean differences in all variables related to motor fitness like Speed, Strength, Co-ordination, Flexibility and Endurance. Drastic change was noticed in post-test results after 12 week compared to pre-test related to parameters of motor fitness.
3. SAQ training of 6 week significantly enhanced Skill performance of basketball players significantly at the time of intermediate test compared to pre-test. Further significant improvement was noticed in all skill tests from intermediate to post-test as a result of SAQ training. Skill performance of basketball players get sharpened with SAQ training of 12 week and significantly increased from pre-test to post-test.
4. Strength training improves physiological parameters of basketball players even after short training of 6 week at the intermediate level than pre-test. Except Systolic Blood Pressure all vital parameters showed marked improvement. The extended training of 6 weeks (post-test) further enhance the capacity of players significantly than intermediate-test. The effect of strength training has been clearly depicted by pre-test and post-test (after 12 week) comparisons of their physiological parameters which was found to be statistically significant.
5. Motor fitness of basketball players showed positive and significant impact after strength training of limited period of 6 weeks i.e. intermediate-test compared to pre-test. Continuing strength training for 6 more weeks (post-test) helped players to perform better than intermediate-test in terms of motor fitness. Post-test results of motor fitness tests compared to pre-test averages helps to understand how much beneficial is strength training for basketball players.
6. Skill performance of players shows marked improvement by strength training in intermediate-test (6 week training) and post-test (12 week training) over pre-test.

7. Combination of SAQ and strength training affected all parameters positively. While all other physiological parameters like Resting pulse rate, Systolic blood pressure, Diastolic blood pressure and Resting respiratory rate were found to be significantly improved only peak expiratory flow rate remained positive but statistically non-significant in the intermediate evaluation (after 6 week) over pre-test. But enhanced training of 6 week helped to improve the PEF of players significantly in post-test than intermediate-test. Thus till the completion of training session after 12 week in post-test all parameters vary significantly from the pre-training results.
8. Combine SAQ and strength trainings given at the same time enhanced the motor fitness of basketball players from pre-test to the extent of significance at a short interval of 6 weeks (intermediate-test). Further training of 6 weeks i.e. post-test improved flexibility, strength, endurance and co-ordination but speed of players could not be increased significantly compared to intermediate-test. On the other hand improved motor fitness was witnessed by assessing post-test changes compared to pre-test.
9. Dribble test applied to assess skill performance of players showed minor improvement in intermediate-test over pre-test as a result of combined SAQ and strength training in shorter time of 6 week. Intermediate-test and post-test results mean comparison shows improvement in all skill performance tests showing impact of further 6 week training. Over a time of 12 weeks in post-test it behaved similarly like other skill performance tests and significant improvement was noticed compared to pre-test.
10. Although minor changes were observed in physiological parameters like Resting pulse rate, Systolic blood pressure, Diastolic blood pressure, Resting respiratory rate and Peak expiratory flow rate of control group yet nothing significant could be found in intermediate-test(after 6 week training) as well as post-test(after 12 week training) results compared to pre-test.
11. The intermediate comparisons of motor fitness with pre-intervention results suggests that not much improvement occurred due to lack of any specific training. But strength of players increased significantly even without any training after 6 weeks (intermediate-test) and further after 12 weeks (post-test). Rest of the parameters like Speed, Co-ordination, Flexibility and Endurance failed to increase at the same pace.

12. The routine practice of 12 week can enhance the skill performance of players but gradually without any type of specific training as in case of Field goal speed test. Other skill tests advocate the need of specific training due to slow and non-significant improvement in skills of basketball players from control group.
13. The combination of SAQ and strength training showed better results for Resting Pulse Rate among all training groups. Impact of SAQ training and combined training was almost same for Systolic Blood pressure. SAQ training was most useful for Diastolic Blood pressure. The results shows that SAQ training helped a lot to improve resting respiratory rate of players. Maximum increase was noticed in strength training group followed by combined training group for peak expiratory flow rate.
14. Highest impact on flexibility was observed among SAQ training group players. SAQ training of 12 weeks affects the speed of players to the maximum extent. The impact of strength training on enhancing strength was significantly greater than all other training groups. Strength training group showed maximum endurance. Strength training improved coordination among basketball players.
15. SAQ training sharpened the skill performance of basketball players in field shoot test over all other training groups. Maximum basketball throw accuracy was noticed with combined SAQ and strength training. SAQ training group scored above all training groups and control group. Dribble test improved slowly with combined SAQ and strength training till intermediate test but significant improved after 12 weeks like basketball throw accuracy and field shoot test.

To conclude from the following finding it can be seen SAQ training, strength training and combined SAQ and strength training all seem to be an effective way of enhancing physiological, motor fitness and skill performance variables of basketball players. They all were required to attain an overall improvement in performance as different training/treatment programmes had impact on various parameters noticeably. The sessions should be tailored in such a way that different training may be incorporated every week for overall growth of players.

RECOMMENDATIONS:

In the light of findings and conclusion of the present study it can be inferred that future researches can be done in the following direction:

1. Present study included 40 male basketball players randomly. Between age groups and between gender studies can be carried out.
2. Similar study can be conducted on the basis of performance level of players as beginners, state, national and international level players.
3. Some other training programmes besides SAQ and strength training can be included as a part of study to compare like Circuit training, Plyometric training etc.
4. Effect of various combination of training programmes can be studied.
5. Anthropometric parameters can affect the performance of players thus it can be taken as a part of the study.
6. Psychological well-being and diet can be the influencing factors for performance of players thus a study keeping in view may help for coaches and selectors.
7. The similar study can be conducted by taking other variables.