

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

Basketball is recognized as a complex activity demanding skillful action and quick reflexes of the individual. The skills of the game are pleasurable and provide immediate rewards and warrants for quick action and movement. Thus the game of basketball demands a high level of fitness that will enable the player to run strongly, to move quickly off the mark in any direction, to control, to pass accurately and to tackle efficiently throughout the game. Basketball requires a fairly high standard of physical fitness along with skills. Since the game of basketball is played for 40 minutes it demands a high level of physical fitness and the training programme should be planned accordingly. The player in good physical condition is generally thought to have the ability to do sustained work over a long period. Hence speed, endurance, power, agility, cardiovascular endurance etcetera, are essential qualities required to be developed by all players.

Vigorous training, the blood circulation quickness, blood and lymph stream through the muscle, supply the cells with oxygen and nutrition removing waste products. The heart activity is accelerated exercise and strengthening its own fibers. Exercise also stimulates growth, and strengthens the bones, muscles, ligaments and tendons. Exercises produce biochemical changes in the cardio respiratory system and other important alterations in body composition such as proteins, carbohydrates, lipids and triglyceride levels

Different training protocols do give us enormous benefits for the whole some physical and health fitness of a player apart from improving performance in the game. In this research the investigator was interested to find out the influence of plyometric and swiss ball training

on selected fitness and biochemical variables, selected variables among university men basketball players.

To achieve the purpose, sixty university level men basketball players were randomly selected from different universities in Tamil Nadu state, who participated in university level tournaments. The subjects were randomly selected and their age group was between 19 to 25 years with mean age of 22 with standard deviation ± 2.5 years. The subjects expressed their willingness to participate in the study. Physical fitness variables, explosive power, speed, agility and flexibility, biochemical variables, triglycerides, total cholesterol, high density lipoprotein, and low density lipoprotein were selected for the study. Randomly selected 60 subjects were divided into three groups, experimental group I, experimental group II and control group. Experimental group I underwent 12 weeks plyometric training, group II underwent swiss ball training for 12 weeks. Group III was considered as control group which was not involved in any special treatment, except of their routine. Prior to the experimental treatment all the subjects were measured of their physical fitness levels, explosive power, speed, agility and flexibility and blood samples to determine biochemical variables, triglycerides, total cholesterol, high density lipoprotein and low density lipoprotein, which forms the pre test scores. After the completion of 12 weeks experimental, the subjects were measured of the selected physical and biochemical variable, which was considered as the final or post test scores. The difference between the initial and final scores was considered as the effect of the respective training.

5.1.1 RESULT

The results of the study proved that plyometric and swiss ball training significantly improved physical fitness variables speed, agility and flexibility and reduced biochemical variable, total cholesterol. Plyometric training improved explosive power and reduced LDL

significantly. There were no significant changes in triglycerides and HDL due to the experimental protocols.

5.2 CONCLUSIONS

Within the limitations and delimitations, the following conclusions were drawn based on the results and discussions made.

1. It was concluded that plyometric training significantly improved physical fitness variable, such as, explosive power of the university men basketball players.
2. It was concluded that comparing between plyometric training and swiss ball training, plyometric training was significantly better in improving explosive power of the subjects.
3. It was concluded that plyometric training and swiss ball training significantly improved physical fitness variable, such as, speed of the university men basketball players.
4. It was concluded that comparing between plyometric training and swiss ball training, plyometric training was significantly better in improving speed of the subjects.
5. It was concluded that plyometric training and swiss ball training significantly improved physical fitness variable, such as, agility of the university men basketball players.
6. It was concluded that comparing between plyometric training and swiss ball training, there was no significant difference between the plyometric training and swiss ball training in influencing agility of the subjects.
7. It was concluded that plyometric training and swiss ball training significantly improved physical fitness variable, such as, flexibility of the university men basketball players.

8. It was concluded that comparing between plyometric training and swiss ball training, swiss ball training was significantly better in improving flexibility of the subjects.
9. It was concluded that there was no significant change due to 12 weeks plyometric and swiss ball training on biochemical variable, triglycerides.
10. It was concluded that plyometric training and swiss ball training significantly reduced biochemical variable, such as, total cholesterol of the university men basketball players.
11. It was concluded that comparing between plyometric training and swiss ball training, plyometric training was significantly better in reducing total cholesterol of the subjects.
12. It was concluded that there was no significant change due to 12 weeks plyometric and swiss ball training on biochemical variable, high density lipoprotein.
13. It was concluded that plyometric training significantly reduced biochemical variable, such as, low density lipoprotein of the university men basketball players.
14. It was concluded that comparing between plyometric training and swiss ball training, plyometric training was significantly better in reducing low density lipoprotein of the subjects.

5.3 RECOMMENDATIONS

The findings of the study proved that both plyometric training and swiss ball training could further improve speed, agility, flexibility and reduce total cholesterol of the basketball players. It is recommended that the training protocols suggested in this research can be incorporated in the training schedule for training the elite basketball players.

The findings of this research and the previous researches proved that only longitudinal exercise protocols could beneficially alter biochemical variables, triglycerides and HDL,

hence, it is recommended that coaching programs for elite players can be made uniform as much as possible so that the training effects can be beneficially absorbed on selected biochemical variables.

5.4 SUGGESTIONS FOR FURTHER RESEARCHES

During the course of the research, the investigator came across number of new ideas that can be pursued by future researchers. Some of those are presented here as suggestions for further researches.

1. Controversy still persists with regard to the influence of training protocols on selected biochemical variables among elite athletes, sedentary individuals etcetera. Hence, a separate study may be undertaken to pinpoint what type of training protocols would influence which of the biochemical variable.
2. It was suggested to undertake a longitudinal study to find out the influence of selected training protocols on selected biochemical variables on basketball men players.
3. The relationship between the training protocols of different players, such as, basketball, swimming, tennis, sprinters, weight lifters etcetera and the levels of biochemical variables may be studied to throw more light on this area.
4. Similar researches may be undertaken among women basketball players and school level basketball players.
5. A separate study to relate the selected fitness and biochemical variables with playing ability of different levels of players may be conducted.