

CHAPTER V

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

Football training and its coaching should assist in the focusing of the appropriate muscles for fitness. Football is a sport that demands a broad range of athletic abilities, which would include explosive acceleration and high sprint performance speed; muscular strength and endurance in the leg muscles; muscle stability and elevated amounts of neuromuscular co-ordination, physical coordination and agility, the ability to comprehend where the body is and move it; dimensional stability to stay injury free and proper balance between the quadriceps muscles and hamstrings, along with strength imbalances between the left and right limbs. As a result, every soccer player wants to increase their motor abilities, physiological, and biochemical variables that affect the tasks they accomplish. The investigator's research goal is to determine the impact of plyometric, aerobic, and resistance training on taken motor fitness, physiological, and biochemical variables in Kerala college level male soccer players.

This study's goal was to see how plyometric, aerobic, and resistance training affected college-level men soccer players in Kerala. A total of eighty college football players who competed in intercollegiate tournaments were chosen at random for this project. The players came from several colleges across Kerala. They were separated into four groups, each with twenty volunteers, and were assigned to experimental group I (plyometric training), experimental group II (aerobic training), experimental group III (resistance training), and control group at random. In order to fix the exercise load, a

pilot study was undertaken to determine the subjects' beginning capacity. For this aim, 15 football players who were not participants in the research were chosen and given plyometric, aerobic, and resistance training. The motor fitness variables, speed, explosive power, and cardiorespiratory fitness, physiological variables, resting pulse rate, and breath holding time, and biochemical variables, serum albumin, and total cholesterol, have all been opted as dependent variables after considering feasibility criteria, instrument availability, and the relevance of the variables in the current study.

The experiment was set up as a genuine random group design with a pre and post test. The subjects (n=80) were divided into four groups of 20 college football players respectively. Experimental Teams I, II, and III, as well as the control group, were allocated to the groups. Plyometric training was designated to experimental group I, aerobic training was applied to experimental group II, and resistance training was given to experimental group III. Pre-tests on specific motor fitness, physiological, and biochemical variables such as speed, explosive power, cardiorespiratory endurance, resting pulse rate, breath holding duration, serum albumin, and blood cholesterol were conducted for all of the volunteers. For a total of 12 weeks, the experimental groups were subjected to their specific experimental treatments. After a twelve-week trial period, all four groups were given post tests on the above-mentioned dependent variables. The instruction was arranged for four days a week.

5.1.1 LEVEL OF SIGNIFICANCE

The influence of plyometric, aerobic, and resistance training for the time period of twelve weeks was evaluated between pre and post test data acquired from college level

men soccer players in Kerala. The statistical significance of the difference in the selected criterion variables between the initial and final means was determined through statistical treatment utilizing Analysis of Covariance (ANCOVA). The individuals were examined on selected criteria variables to see if plyometrics, aerobics, and resistance training had any effect, and ANCOVA has been used to see whether there is any significant difference among the groups on picked criterion variables independently. The significance was tested with a 0.05 level of confidence in all situations, which was deemed appropriate.

5.1.2 RESEARCH OUTPUTS

The study's findings and related discussions revealed that 12 weeks of plyometric training, aerobic training, and resistance training positively impacted selected motor fitness variables such as speed, explosive strength, cardiorespiratory endurance, physiological variables such as pulse rate at rest, breath holding time, and biochemical variables serum albumin and total cholesterol.

5.2 CONCLUSIONS OF STUDY

The following results were drawn within the study's constraints and delimitations.

1. Determined that 12 weeks of plyometric training, aerobic training, and resistance training effectively increased motor fitness variable, speed, and there was no notable change in speed improvement between treatment groups.
2. Study found that the taken time period of 12 weeks of plyometric training, aerobic training, and resistance training effectively enhanced the motor fitness variable,

- explosive power, of college level male soccer players in Kerala, with no big variation in enhancing explosive power among treatment groups.
3. It was concluded that twelve weeks period of plyometric training, aerobic training, and resistance training considerably increased motor fitness variable, cardiorespiratory endurance, and there was no significant difference in strengthening cardiorespiratory endurance across treatment groups.
 4. It's been discovered that the period of twelve weeks of plyometric-aerobic- resistance trainings drastically altered physiological variables, such as resting pulse rate, in college level men soccer players from Kerala, and that aerobic training found to be infinitely greater to the plyometric and resistance training groups.
 5. It has observed that 12 weeks plyometric exercises, aerobic training and resistance training significantly improved physiological variable, breath holding time of the college level men soccer players of Kerala and there was no significant difference between treatment groups in altering breath holding time.
 6. It is noticed that 12 weeks plyometric drills, aerobic training and resistance training significantly altered biochemical variable serum albumin of the college level men soccer players of Kerala and it was also found there was significant difference between plyometric group and resistance training group in altering serum albumin.
 7. Realized that 12 weeks plyometric training, aerobic training and resistance training significantly altered biochemical variable total cholesterol of the college level men

soccer players of Kerala and there was no significant difference between treatment groups in altering total cholesterol.

5.3 RECOMMENDATIONS

The study's results noted that that college level men soccer players of Kerala can beneficially alter their motor fitness, physiological and biochemical variables through plyometric training, aerobic training and resistance training. The following suggestions are offered in light of the aforesaid findings.

1. Efforts in the physical education curriculum of college men soccer players can be taken to indicate plyometric training, aerobic training, and resistance training because it increases total biochemical and motor fitness physiological and biochemical factors.
2. Coaches, sports scientists, and educational authorities may make efforts to include plyometric, aerobic, and resistance training in athlete preparatory training plans.
3. Advantages of plyometric, aerobic and resistance training may be popularized among college level men footballers for their all-round improvement of motor fitness, physiological and biochemical levels.

5.4 RECOMMENDATIONS FOR FUTURE RESEARCH

During the course of the investigation, the researcher comes across several comments and plans that potential aspiring researcher can investigate. Some of the most important are listed here.

1. A separate study among college level men soccer players might be conducted in order to determine the efficacy of plyometric training, aerobic training, and resistance training and variables not covered by this study.
2. A much-related investigation could be carried out. among college sportsmen of different games to find out the effect of plyometric training, aerobic, and resistance training on their physical fitness levels and skills of college men soccer players.
3. Because this study only looked at college men, a similar study examining the effects of plyometric, aerobic, and weight training on college women may be attempted.
4. A comparative effect of resistance training with weights and other modes of resistance training may be under taken to throw more lights on the usefulness and purposes of resistance training.