Chapter –V

SUMMARY, CONCLUSIONS & RECOMMENDATIONS
Summary

Physical fitness is one’s richest possession. It cannot be purchased. It has to be earned through a daily routine of physical exercise. It is evident that fit citizens are a nation’s best asset and weak ones are its liability. It is the responsibility of every country to promote physical fitness of its citizens because fitness is the basic requirement for most of the tasks to be undertaken by an individual in his daily life.

There many ways and means to improve one’s health and physical fitness. Routine physical exercise includes innumerable permutation and combination of exercise protocols. To name most popular ways; the aerobic dances, callisthenic drills, slow continuous running, brisk walking, laughter exercises, yogasanas, and so on. Each of these exercise have got its own do’s and don’ts. It is wise to involve in an exercise or group of exercise to optimize the gain with a clear knowledge, what is to be developed. Knowledge of this sought helps to participants in involving themselves in a meaningful and most effective regiment of exercises, in turn optimize the gain.
The purpose of the study was to find out the effect of callisthenic exercises, aerobic exercises and combination of callisthenic and aerobic exercise on selected physical fitness variables of high school male students.

Total 240 high schools boys of 13 to 15 years were selected at random as subjects for this study. Four groups were constituted with 60 boys each on random basis, out of which three groups were the experimental groups and one group was the control group.

To find out the effect of twelve weeks callisthenic exercises, aerobic exercises and combination of callisthenic and aerobic exercises programmes on the physical fitness variables, the selected physical fitness variables were cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body composition. Before administering the training protocol, an initial test was taken to measure the initial status of physical fitness of the subjects. The training programme was also selected randomly and administered in a progressive manner throughout the duration of 12 weeks. After the completion of training programme, a final test was conducted to obtain the final status of physical fitness of the subjects. ANCOVA was used to find out the significant difference between the means
of experimental and control groups followed by a Least Significant Difference Post Hoc Test, wherever the F ratio was found significant. The level of significance was set at 0.05.

In the case of Cardio respiratory endurance, the analysis of data revealed that, there were significant differences in performance between the experimental groups. The group which underwent the aerobic training programme was found superior to other experimental groups, followed by the combination of aerobics and calisthenics groups. The control group did not show any significant improvement in cardio-respiratory endurance.

In the case of muscular strength, the experimental group which underwent the callisthenic training programme exhibited the best improvement compared to other experimental groups. The combination of aerobics and calisthenics experimental group stood second to the calisthenics group. The control group and the aerobic training group did not show any significant improvement in muscular strength.

In the case of muscular endurance, the analysis of data revealed that, the experimental group which underwent the callisthenic training
programme over shadowed the other experimental groups. Combination of aerobics and calisthenics experimental group also showed significant improvement in Muscular endurance followed by the aerobic training group. The control group did not show any significant improvement in muscular endurance.

As far flexibility was concerned, the combined exercise group which showed significant improvement compared to the other experimental groups. Callisthenic group also showed significant improvement in flexibility, compared to the group which had only aerobic exercises. The control group did not show any significant improvement in flexibility.

In the case of body composition, the experimental group which underwent aerobic training programme showed significant improvement in lean body mass. Combination of aerobics and calisthenics experimental group also showed significant improvement in lean body mass, compared to the group which has only callisthenic exercises. The control group did not show any significant improvement in lean body mass.
Conclusions

Based on the analysis of the data and results, the following conclusions were drawn

1. Aerobic exercises were found superior in improving cardio respiratory endurance compared to combination of aerobics and calisthenics, and calisthenics exercise alone.
2. Callisthenic exercise were found superior in developing muscular strength and muscular endurance compared to the combination of callisthenic and aerobics, and aerobic exercise alone.
3. Combinations of calisthenics and aerobics exercises were found effective in developing trunk and hamstring flexibility of the subjects, compared to the calisthenics and aerobic training.
4. Aerobics exercises were found more effective in improving the lean body mass and decrease in the body fat compared to the combination of aerobics and calisthenics and calisthenics alone.

Recommendations

In the light of the findings and the conclusions drawn, the following recommendations are made.

1. For the selection of exercise, principle of specificity may be considered in order to achieve specific adaptations.
2. Calisthenics, aerobics are the simple form of exercises which can develop aerobic endurance, muscle tone, and muscular endurance
without apparatus. Hence, these exercise protocols may be implemented in school settings.

3. Calisthenics and aerobic exercises are exercise protocols that can be performed rhythmically with variety of simple movements. Moreover a huge number of students can be engaged at a time. Hence, these exercises may be suitable during the physical education classes of school children.

4. Calisthenics and aerobic exercises are enjoyable, fulfilled protocols that are effective in developing different motor fitness components. Based on the requirement and maturity level of the students, appropriate exercises may be chalked out by the physical education teachers for different age groups.

5. A curriculum for the school children can be designed with selected exercise protocols which will promote the health related fitness of the children studying in different standards right from kindergarten to higher secondary level.

6. Similar studies may be conducted by taking different training protocols.

7. Similar studies may be conducted by taking different age group children.