CHAPTER - V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
SUMMARY

The World Health organization has been repeatedly warning the governments, especially developing countries, of the deteriorating health standards of the Youth. Scores of research studies undertaken in the field of exercise sciences and health-related physical fitness, have been pointing to the lack of awareness among the youth leading to increase incidence of hypokinetic diseases and the resultant enhancement of mortality and mobility. WHO’s recent surveys reveal dangerous proportions of the incidence of heart disease, stroke and obesity, led - diabetes in South Asia. But the governments, either slow down or fail to notice these grievous conditions which directly affect their coxe - citizen. Health problems are rising to epidemic proportions and fitness has now become a national concern. Billions of national money are being expended on disease eradication rather than prevention programmes.

The majority of today’s youth are products of university education. They spend the best part of their lives in any one of the educational campuses of the country. If the government initiates an ideal curriculum in campuses, a vast amount of tax payer money can be saved for more useful nation building activities. An educative mass-oriented fitness-awareness inculcation programme, if included in the curriculum, can produce perspective of national physical fitness standard and methods of achieving it. Where best, but the educational campuses for achieving such a noble objective, to create the ideal citizen. The ‘general thrust area’ then, was identified as the curriculum which should accommodate all integral parts of education including physical
education. A scientific programme of physical education in campuses can alone inculcate the required national fitness awareness in the minds of the students that would help them to lead a healthy fruits profession, once they quit the campus. There for the 'specific thrust area' then could be identified as the physical education programme in the campus.

Plyometric training is very specific in nature but very broad in applicability. For the lower extremities, it is designed to train the athlete to develop either vertical or horizontal acceleration, and all movements in running and jumping. Finally, remember that this form of training should always be preceded by a basic strength or hypertrophy phase of training.

Plyometric training is similar to progressive resistance training in that both incorporate overload principles. Drills should progress gradually from basic to difficult, and from low to high intensity. Form and technique should be emphasized at all stages of the program. In applying plyometrics to a training program, use imagination. Develop new exercise. Do not be afraid to experiment. In setting up a plyometric training program, keep in mind the following: 1) Maximum tension is produced when the muscle is stretched rapidly; 2) The faster the muscle is lengthened, the greater the tension; 3) The rate is more important than the magnitude of the stretch; 4) Use the overload principle – strength can only be increased if the muscle works at a greater intensity than normal; 5) Do not change the basic pattern of the movement which you are trying to imitate.

The main purpose of the study was to quantity responses of anthropometric and physiological competencies of untrained college males, to varied intensity and frequency of plyometric training.
To accomplish the objective, four training programmes were formulated, in the study. One hundred and twenty untrained students volunteer were randomly divided into four groups: (a) 80% intensity with 4 days frequency, (b) 80% intensity with 2 days frequency, (c) 70% intensity with 4 days frequency and (d) 70% intensity with 2 days frequency. The four experimental groups were progressively introduced in the thirteen (13) dependent variables, were compiled before the commencement of the six weeks experimental study, and final test was taken after six weeks of respective training.

The study was delimited to the Selvamm Arts and Science College Namakkal, of the state. One hundred and twenty untrained student were chosen as subjects who represented the 1700 strong college population in the study.

The experimental design used in the study was a completely randomized measures design.

The subjects' selection and assignment were at random. The subjects were not equated in relation to the factors in which they were examined. Hence the difference among the means of pre-test scores were taken into account during the analysis of post-test differences among the means. This was achieved by analysis of covariance, where in final means were adjusted for the differences in the initial means and the adjusted means were tested for significance. Whereever significant scheffe's post-hoc test was applied to determine the significance of paired means differences, the level of significance being fixed at 0.05 level.
FINDINGS

The following results were observed after the statistical analysis of covariance. Significant responses to four types of plyometric training of six weeks, were observed in all the thirteen selected parameters of the study namely Body weight, Chest girth, Thigh girth, Calf girth, Biceps girth, Resting heart rate, Calorie consumption, VO₂ Max, Haemoglobin count, Anaerobic capacity, Mean arterial pressure, Flexibility and Fat percentages.

The four training programme attempted in the study, on the whole, brought about significantly positive responses from the respective experimental group subjects.

CONCLUSIONS

In the light of the study under taken certain limitations imposed by the experimental conditions, the following conclusions were arrived at.

1. a) 80% intensity with 4 days frequency
   b) 80% intensity with 2 days frequency
   c) 70% intensity with 4 days frequency and
   d) 70% intensity with 2 days frequency of plyometric training improved selected anthropometric variables (Body weight, Chest girth, Thigh girth, Calf girth, Biceps girth) and physiological variables (Resting heart rate, Calorie consumption, VO₂ Max, Haemoglobin count, Anaerobic power, Mean arterial pressure, Flexibility and Fat percentage) among college men students.

2. 80% intensity with 4 days frequency of plyometric training improved selected anthropometric variables (Body weight, Chest girth, Thigh girth, Calf girth and Biceps girth) and physiological variables (Resting heart rate, Calorie consumption, VO₂ Max, Hemoglobin count,
Anaerobic power, Mean arterial pressure, Flexibility and Fat percentage) of 80% intensity with 2 days frequency, 70% intensity with 4 days frequency and 70% intensity with 2 days frequency among college men students.

3. 80% intensity with 2 days frequency of plyometric training improved selected anthropometric variables (Body weight, Chest girth, Thigh girth, Calf girth, Biceps girth) and physiological variables (Resting heart rate, Calorie consumption, VO₂ Max, Hemoglobin count, Anaerobic power, Mean arterial pressure, Flexibility and Fat percentage) of 70% intensity with 4 days frequency and 70% intensity with 2 days frequency among college men students.

4. 70% intensity with 2 days frequency of plyometric training improved the selected anthropometric variables (Body weight, Chest girth, Thigh girth, Calf girth, Biceps girth) and physiological variables (Resting heart rate, Calorie consumption, VO₂ Max, Hemoglobin count, Anaerobic power, Mean arterial pressure, Flexibility and Fat percentage) of 70% intensity with 2 days frequency among college men students.

**RECOMMENDATIONS**

1. On the basis of the finding of the study it is recommended that 80% intensity with 4 days frequency, 80% intensity with 2 days frequency, 70% intensity with 4 days frequency and 70% intensity with 2 days frequency of plyometric training could be utilized as useful methods of improve the selected anthropometric and physiological variables of college men students.

2. 80% intensity with 4 days frequency of plyometric training is the best method of improving the set of Anthropometric and physiological variables than that of 80% intensity with 2 days frequency, 70%
intensity with 4 days frequency and 70% intensity with 2 days frequency.

**SUGGESTIONS FOR FURTHER RESEARCH**

1. The same study may be conducted for college female students.
2. This study may be followed up with increased intensity and frequency of training.
3. Similar study may yield significantly higher response from parameters, if conducted with longer training programmes.
4. A similar study can be conducted among school children, and men and women students of various universities.