

CHAPTER – V

**SUMMARY, CONCLUSION AND
RECOMMENDATIONS**

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SUMMARY

The purpose of the study is to evaluate the influence of varied intensity aerobic training on selected bio-chemical, hematological and health related physical fitness variables of women students. To achieve this purpose sixty female students from Idhaya College of Arts and Science for Women were randomly selected and the age of the subjects were between 17 and 21 years. The subjects were categorized into four different groups namely group I (easy zone), group II (steady zone), group III (tempo zone) and group IV (control group).

Each training schedule were divided into three phases namely phase I, phase II and phase III and each phase consist of four weeks. Easy zone group were given at varied intensity aerobic training ranging from 45% to 60% severity of their maximum heart rate by keeping the volume constant at thirty minutes in all the phases. The aerobic training with varied intensity level for the steady zone were from 55% to 70% severity of their maximum heart rate with a progressive increase in volume for every phase from twenty minutes to thirty minutes (twenty minutes in phase I, twenty five minutes in phase II and thirty minutes in phase III). The tempo zone was given at varied intensity aerobic training ranging from 65% to 80% severity of their maximum heart rate by keeping the volume constantly for twenty minutes for every phase. All the experimental groups were given training for five days a week for a period of twelve weeks. Control group did not participate in any special training apart from their normal day-to-day activities. Initial tests were taken on selected biochemical, hematological and health related physical fitness variables for all the subjects and the collected data were considered as pre test data. After the training intervention period of twelve weeks post test was conducted and the scores were recorded. The collected pre and post test data on selected variables were subjected to statistical treatment using Analysis of Covariance (ANCOVA) to find out the differences among the four groups.

The table given below is the adjusted post test ‘F’ ratio values of the selected biochemical, hematological and health related physical fitness variables.

Table

Variables	‘F’ ratio Values
Biochemical Variables	
Total Cholesterol	36.046*
Triglycerides	30.623*
High density lipoprotein	36.725*
Low density lipoprotein	52.783*
Very low density lipoprotein	30.623*

*significant at 0.01 level of significance.

Hematological Variables	‘F’ ratio Values
Hemoglobin	35.046*
White Blood Cells	56.448*
Red Blood Cells	35.594*

* Significant at 0.01 level of significance.

Health Related Physical Fitness Variables	‘F’ ratio Values
Physiological Variables	
Cardiovascular fitness	55.024*
Muscular Strength	2.587 ^{NS}
Muscular Endurance	50.718*
Flexibility	31.157*
Body Composition	19.158*

NS Not Significant at 0.05 level of significance.

*Significant at 0.05 level of significance.

CONCLUSION

Based on the discussion the following conclusions were drawn.

Bio-chemical variables

The results of the study indicates that all the training intervention groups namely easy zone, steady zone and tempo zone have significant improvement in selected biochemical variables and the control group did not show any significant result. This indicates that the training program is having a positive influence towards the selected biochemical variables. Further, the result reveals that the steady zone and tempo zone are significantly better than easy zone. The steady zone is found to have significant improvement on total cholesterol, high density lipoprotein, low density lipoprotein whereas tempo zone has shown significant improvement on triglycerides and very low density lipoprotein.

Hematological variables

The results of the study indicate that all the training intervention groups namely easy zone, steady zone and tempo zone has significant improvement in selected hematological variables when compared to the control group. This indicates that the training program is having a positive influence towards hematological variables such as hemoglobin, white blood cells and red blood cells.

Health Related Physical Fitness variables

The results of the study indicates that all the training intervention groups namely easy zone, steady zone and tempo zone have significant improvement in the components of health related physical fitness except muscular strength and the control group did not show any significant result. This indicates that the training program is having a positive influence towards the components of health related physical fitness. Further, the result reveals that the steady zone has shown significant improvement on the components of health related physical fitness except muscular strength.

Finally, it is concluded that aerobic training with 60% to 70% severity of their maximum heart rate has highly influenced the selected bio-chemical, hematological and health related physical fitness variables of the sedentary women students.

RECOMMENDATIONS

Based on the conclusions of the study, the following recommendations are made:

- It is suggested that aerobic training with 60% to 80% intensity can be followed by the coaches and physical directors in colleges which in turn will improve the biochemical, hematological and health related physical fitness variables of women.
- It is suggested that aerobic training with 60% to 80% intensity may be a good stimulus to improve the lipoprotein profiles for 17 to 21 years women students. Therefore, the selective aerobic training may be recommended to the over-weight and obese college students of this age range, which may prevent the development of cardiovascular diseases in adulthood.
- The present study influences the hematological parameters which may be recommended to the athletes in order to maintain their hematological balance throughout their sports carrier.

SUGGESTIONS FOR FURTHER RESEARCH

The investigator suggests that,

- Similar studies may be conducted on variables which are not considered in this study.
- May be conducted on male subjects.
- Study can be conducted on different age groups with control on food habits.
- Regular programme on aerobic training in an organized manner can be suggested for the occasional participants in sports to enhance their health and fitness.