Chapter - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS
SUMMARY

Background of the research concept: Aerobic fitness of an individual reflects the Cardio Vascular efficiency of the individual. Regular involvement in Cardio respiratory fitness activities make the individuals more resistant to Cardiovascular Diseases like Atherosclerosis, Coronary Heart Disease. Cardio respiratory fitness programs also protect the individual from metabolic disorders like Diabetes Mellitus. Cardio respiratory fitness can be enhanced through participation in aerobic exercise programs. Enhanced cardio respiratory fitness enhances the functioning ability of heart and lungs leading the individual to be able to participate in higher levels of cardio respiratory endurance exercise programs. Several markers of the Cardiovascular Diseases like Cholesterol, Plasma Fibrinogen can be controlled effectively through aerobic exercises of any kind including aerobic dancing. Different forms of exercises at different intensities may have different effects on the Cardio respiratory fitness and consequently on Resting Heart Rate (RHR). Lower RHR gives individuals more buffers for exercising intensity and can exercise more time at the same intensity for longer duration. Different intensities of aerobic exercise programs have different impact on the cardio respiratory systems and may give out different consequent benefits. Resistance form of training is also effective in controlling the Cardio Vascular risk factors as well bring changes in the fitness levels of the individuals.

Presence of recommended levels of HDL-C in blood is another important factor for better Cardio Vascular Health. It is also that the LDL-C and VLDL-C levels in blood should be as low as possible to prevent atherosclerosis of arteries. Another important marker in Cardio Vascular Diseases is serum Triglycerides, is regulated by
exercise programs. Different exercise protocols with different metabolic cascades and different effects on the tissues of Cardio vascular systems produce different effects. Aerobic form of exercises has proven as effective tool in controlling the cholesterol of the individuals though anaerobic form of exercise also has some beneficial effect. Aerobic form of exercise can enhance the HDL-C and reduce the LDL-C among individuals. But it is also necessary to understand the effects of different intensities and durations of aerobic exercises in combination with resistance training on these Cardiovascular Disease markers. Very less number of studies are there examining the effects of this kind of combined aerobic and resistance training on women. Aerobic training and general physical activity brings many adaptations in the parameters of cardiovascular fitness.

Endurance training is also considered as an important method of controlling the cardiovascular risk factors. There have been several such investigations across the globe with different protocols, varieties and intensities of aerobic training. Resistance training has also some significant effects on different risk factors of Cardiovascular and metabolic disorders. Resistance training improves the muscle protein content and thereby could enhance the resting metabolic rate of the individuals. The combined effect of different forms of exercises like aerobic, anaerobic and resistance etc are to be studied on fitness outcomes, cardiovascular risk factors of the individuals.

Objective of the study

The study aimed to examine and analyze the effect of different progressive intensities of combinations of brisk walking aerobic running and resistance training on the Resting Heart Rate (RHR), HDL-C, LDL-C, VLDL-C and Triglycerides among healthy, young and previously untrained Women.
Methods adopted in the study:

Seventy five volunteer individuals were randomly assigned to five groups after convincing the individuals for the study. Four acted as activity groups and one as control group. Activity groups exercised as per the protocol of the study following the intensity principle strictly. Activity for the experimentation selected was brisk walking and aerobic running on the percentage of the individual’s maximum heart rate and resistance training basing on the body weight of the individuals. The initial intensities were forty, forty five, fifty and fifty five percent and progressed to fifty five, sixty, sixty five and seventy percent respectively for groups. All the subjects were previously untrained women in the age group of eighteen to twenty years. The baseline RHR, HDL-C, LDL-C, VLDL-C and Triglyceride values were compared with the post experimentation values with the help of Analysis of Covariance (ANCOVA). Scheffe’s Post Hoc individual comparison tests were performed to find out the source of significant difference on the effect of aerobic dancing and to find out the source intensity that had brought significant changes in the selected criterion variables.

CONCLUSIONS OF THE STUDY

1. All the four start intensities and progressing to the respective maximum intensities in combination of aerobic and resistance training caused significant reduction in the Resting Heart Rate of the individuals of the study.

2. Starting intensity of fifty five and progressing to seventy percent of aerobic and resistance training brought highly significant reduction in Resting Heart Rate of the individuals of the study than the other three exercise experimental protocols.
3. All the four start intensities of combination of aerobic and resistance training protocols of the experimentation brought significant increments in the HDL-C of the individuals of the study.

4. Starting intensity of fifty five and progressing to seventy percent of aerobic and resistance training brought highly significant increase in HDL-C of the individuals of the study.

5. All the four start intensities of combination of aerobic and resistance training protocols of the experimentation brought significant decrements in the LDL-C of the individuals of the study.

6. Starting intensity of fifty and progressing to sixty five percent of aerobic and resistance training brought highly significant decrease in LDL-C of the individuals of the study than the other three starting intensity protocols.

7. All the four start intensities of combination of aerobic and resistance training protocols of the experimentation brought significant decrements in the VLDL-C of the individuals of the study.

8. Starting intensity of fifty five and progressing to seventy percent of aerobic and resistance training brought highly significant decrease in VLDL-C of the individuals of the study.

9. Only the Starting intensity of fifty five and progressing to seventy percent of aerobic and resistance training brought highly significant decrease in Triglycerides of the individuals of the study.
RECOMMENDATIONS

1. Starting from medium and progressing to high intensity aerobic and resistance training in combination would be highly beneficial in reducing the Resting Heart Rate of the individuals signifying the increased Physical Fitness Index.

2. High intensity aerobic training would be most beneficial and effective in reducing the RHR of the individuals very significantly.

3. Starting from medium and progressing to high intensity aerobic and resistance training in combination would be highly beneficial in enhancing the HDL-C of the individuals and prevent onset of cardiovascular diseases.

4. Starting from medium and progressing to high intensity aerobic and resistance training in combination would be highly beneficial in reducing the Triglycerides, which measure is considered as a marker of atherosclerosis of arteries, and prevent onset of cardiovascular diseases.

5. High intensity aerobic training would be beneficial in controlling the Triglycerides of the individuals.

6. Low to medium intensity aerobic and resistance training in combination would be highly beneficial in reducing significantly the LDL-C and VLDL-C of the individuals.