CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The detailed summary of the thesis on the topic “Effect of varied aerobic exercises on selected fitness, physiological, biochemical and psychological variables on obese students of engineering college.” is given below.

SUMMARY

The purpose of this study was to find out the effect of varied aerobic training on selected fitness, physiological, biochemical and psychological variables among obese men engineering college students. To achieve the purpose of the study, 60 male obese engineering college students of Ahmedabad Institute of Technology were randomly selected as subjects and their ages were between 20 - 25 years (Mean ± SD: 22.34±1.34). The subjects were randomly divided into three groups and each group consists of twenty subjects. Group one acted as experimental group-one and group two acted as experimental group-two and group-three acted as control group. Group-one underwent floor aerobic training and Group-two underwent step aerobic training for twelve weeks. Control group was not exposed to any treatment. Pretest were conducted for all the 60 subjects on selected physical fitness, physiological, biochemical
and psychological variables. After the experimental period of twelve weeks, post test was conducted and the scores were recorded. The variables selected for the study were Physical Fitness Variables: Cardiovascular Endurance, Lower Back and Hamstring Muscles Flexibility, Muscular Strength of Arms, Muscular Endurance of Legs and Body Composition. Physiological Variables: Vital Capacity, Resting Heart Rate, Mean Arterial Blood Pressure, Positive Breath Holding Capacity and Resting Respiratory Rate. Biochemical Variables: High Density Lipoprotein, Low Density Lipoprotein, Triglycerides, and Total Cholesterol. Psychological Variables: Self Confidence, Emotional Adjustment, Assertiveness, Inter Personal Relationship and Stress Management. The study was formulated as a True Experimental Design: Three Groups Pre-test Post-Test Randomized Group Design. The statistical technique employed in the study was descriptive statistics – mean and standard deviation and comparative statistics – one way analysis of co-variance (ANCOVA). In case of significant results, post hoc test – least significant difference (LSD test) was used at 0.05 level of significance.

The findings indicate that there is no significant difference among the three groups on muscular strength of arms. But, there is a significant difference among the three groups on cardiovascular endurance, muscular endurance of legs, lower back and hamstring
muscles flexibility and body composition. It was evident that there is a significant difference between floor aerobic group and step aerobic group, between floor aerobic group and control group as well as between step aerobic and control group on cardiovascular endurance. Here, floor aerobic group showed more cardiovascular endurance followed by step aerobic group and then, control group. It was also evident that there was a significant difference between floor aerobic group and step aerobic group, between floor aerobic group and control group as well as between step aerobic and control group on muscular endurance of legs. Here, step aerobic group showed more muscular endurance of legs followed by floor aerobic group and then, control group. It was also evident that there was a significant difference between floor aerobic group and control group as well as between step aerobic group and control group on lower back and hamstring muscles flexibility. It was also found that there was no significant difference between step aerobic group and floor aerobic group on lower back and hamstring muscles flexibility. Here, floor aerobic group and step aerobic group are equal and had lower back and hamstring muscles flexibility then, control group. It was also evident that there was a significant difference between floor aerobic group and step aerobic group, between floor aerobic group and control group as well as between step aerobic and control group in body composition. Here, control group had more body fat.
percentage followed by floor aerobic group and then, step aerobic group.

The findings also indicate that there was no significant difference among the three groups on vital capacity and mean arterial blood pressure. But, there was a significant difference among the three groups on resting heart rate, positive breath holding capacity and resting respiratory rate.

It was evident that there was a significant difference between floor aerobic group and step aerobic group, between floor aerobic group and control group as well as between step aerobic and control group on resting heart rate and resting respiratory rate. Here, control group had more resting heart rate and resting respiratory rate followed by floor aerobic group and then, step aerobic group.

It was also evident that there was a significant difference between floor aerobic group and step aerobic group, between floor aerobic group and control group as well as between step aerobic and control group on positive breath holding capacity. Here, step aerobic group had more positive breath holding capacity followed by floor aerobic group and then, control group.

The findings also indicate that there was no significant difference among the three groups on triglycerides. But, there was a significant difference among the three groups on high density lipoprotein, low density lipoprotein, and total cholesterol.
It was evident that there was a significant difference between floor aerobic group and step aerobic group on high density lipoprotein. It was also found that there was no significant difference between floor aerobic group and control group; and step aerobic group and control group on high density lipoprotein. Here, floor aerobic group had more high density lipoprotein than step aerobic group and control group.

It was also distinct that there was a significant difference between step aerobic group and control group; and floor aerobic group and control group on low density lipoprotein and total cholesterol. It was also found that there was no significant difference between floor aerobic group and step aerobic group on low density lipoprotein and total cholesterol. Here, control group had more low density lipoprotein & total cholesterol than floor aerobic group and step aerobic group.

The findings also indicate that there was no significant difference among the three groups on emotional adjustment and stress management. But, there was a significant difference among the three groups on self-confidence, assertiveness, and interpersonal relationship. It was evident that there was a significant difference between floor aerobic group and step aerobic group as well as step aerobic group and control group on self-confidence and assertiveness. It was also found that there was no significant
difference between floor aerobic group and control group on self-confidence and assertiveness. Here, step aerobic group had more self-confidence and assertiveness scores then floor aerobic group and control group. It was evident that there was a significant difference between floor aerobic group and step aerobic group as well as floor aerobic group and control group on interpersonal relationship. It was also found that there was no significant difference between step aerobic group and control group on interpersonal relationship. Here, floor aerobic group had more interpersonal relationship scores then step aerobic group and control group.

**CONCLUSIONS**

The following conclusions came after conducting the study, they are stated below.

- Floor aerobic is better than step aerobic to develop cardiovascular endurance, as well as helps in reducing resting heart rate and resting respiratory rate.
- Floor aerobic is better because it develops more high density lipoprotein, and personal relationship than step aerobic.
- Step aerobic is better than Floor aerobic to develop muscular endurance of legs, self-confidence and assertiveness.
RECOMMENDATIONS

In the light of conclusions drawn, the following recommendations may be made:

1. A similar study may be taken by selecting a large sample of different engineering colleges students other than that employed in the study.

2. Similar study may be undertaken by selecting additional variables other than those employed in this study.

3. A similar study may be conducted on various age groups.

4. The same study can also be conducted on female students to find out the relationship.

5. It is also recommended that a similar type of study can be done on other streams.