

## **CHAPTER V**

### **SUMMARY CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1. SUMMARY**

The respiratory system was essential for introducing oxygen in to the body and removing CO<sub>2</sub>. Respiration included breathing, pulmonary diffusion, oxygen transport, and gas exchange. Breathing brought air into and out of the lungs. The average size adult's lungs weight 1 kg and hold 4 – 6 L of air. Air entered the body through the nose or mouth and travelled through the pharynx, larynx, trachea, bronchi, bronchioles, and the alveoli. The alveoli were sites of gas exchange. Inspiration was an active event that led to air entering the lungs. Several muscles contracted but inspiration was largely due to contraction of the diaphragm and external intercostal muscles. The diaphragm was a large dome-shaped muscle that provided airtight separation between the thoracic and abdominal cavities. During exercise, several other rib cage and abdominal muscles contracted to support forced breathing. Muscle contraction caused the ribs to move up and out thereby expanding the thorax. The diaphragm contracted, flattened and moved as much as 10 cm. The purpose of the study was to find out the effects of different intensity of bench step aerobic dance on selected pulmonary variables of untrained college women. To achieve this purpose of the study, forty five college untrained women students from Madras Christian College, Chennai, Tamilnadu, India were selected as subjects, at random. Their age group ranged between 18 to 21 years. The study was formulated as pre and post-test random group design, in which forty five students were divided into three equal groups. The experimental group – 1 (n=15 LI – BSAD) underwent low intensity bench step aerobic dance, the experimental group – 2 (n=15 MI – BSAD) underwent

moderate intensity bench step aerobic dance and control group – 3 (n=15 CG) did not undergo any specific training. In this study, two different intensity of bench step aerobic dance were adopted as independent variables, i.e., low intensity of bench step aerobic dance and moderate intensity bench step aerobic dance. The following pulmonary variables namely tidal volume, inspiratory reserve volume, expiratory reserve volume, vital capacity, inspiratory capacity, forced expiratory volume for 1 second, forced expiratory volume for 2 seconds, forced expiratory volume for 3 seconds, were selected as dependent variables. The present study was undertaken primarily to assess the effects of different intensity of bench step aerobic dance on selected pulmonary variables of untrained college women. As far as the pulmonary variables concerned all the selected variables were measured by spirometer analysis. The pre and post test random group design was used as experimental design for forty-five students selected as subjects; the selected subjects were divided into three groups of 15 subjects each. Ancova was used to find out significant adjusted post-test mean difference of three groups with respect to each parameter and Scheffe's post hoc test was used to find out pair-wise comparisons between groups with respect to each parameter.

## **5.2. CONCLUSION**

1. The selected pulmonary variables namely, tidal volume, inspiratory reserve volume, expiratory reserve volume, vital capacity, inspiratory capacity, forced expiratory volume – 1 second, forced expiratory volume – 2 seconds, forced expiratory volume – 3 seconds, were significantly changed owing to the low and moderate intensity of bench step aerobic dance.

2. The moderate intensity of bench step aerobic dance more favoured on the selected pulmonary variables than the low intensity of bench step aerobic dance and control group.
3. The smaller gain was noticed on the selected pulmonary variables responses to low intensity of bench step aerobic dance than the control group.
4. The selected pulmonary variables were not changed in the control group.

### **5.3. RECOMMENDATIONS**

After analysing the results, the influence of low and moderate intensity of bench step aerobic dance, have improved the selected pulmonary variables among the untrained college women students. Hence, the two methods of training recommended, the person who required for developing the general health fitness, particularly to know their status of the pulmonary parameters in static conditions.

### **5.4. SCOPE OF FURTHER RESEARCH**

1. The similar study is conducted in school and college going students for observing the nature of pulmonary parameters.
2. The low intensity of bench step aerobics dances is familiarised to school children for overcoming the pulmonary disease.
3. The related study is incorporate to school athlete for improving the pulmonary characteristics.

4. The low intensity of bench step aerobics dances is introduced to the middle aged population for identifying the pulmonary obstructive and destructive disease.
5. The medium intensity of bench step aerobics dances is incorporated to the college level athlete for improving the pulmonary variables.
6. The medium intensity of bench step aerobics dances is included to the elite level athlete for improving the pulmonary variables.
7. Similar research needs for observing the changes of pulmonary variables in different hypoxic conditions.
8. The same study incorporates with increasing the intensity and volume of the training to the elite level sports practitioners for gaining more advantages in pulmonary parameters at static dynamic conditions.

