ISOLATED AND COMBINED EFFECT OF SUMBA DANCE TRAINING AND AEROBIC TRAINING ON SELECTED PHYSICAL, PHYSIOLOGICAL, HEMATOLOGICAL BIO-CHEMICAL AND PSYCHOLOGICAL VARIABLES OF HIGH ALTITUDE COLLEGE WOMEN STUDENTS

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CHAPTER-V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

Today training in sports is mostly based upon the competitive motives. Each nation is trying hard and competing with each other devising novel methods and training programmes to improve the skills of its sportsmen and women so that it could win international competitions and prove to be a great nation in the field of sports and games. Today's records are likely to be broken by the performance of tomorrow. This is because stress is being laid on the quality rather than the quantity of training. Hence training in sports has become an important and inevitable factor for enhancing performance and for achieving excellence. As sports competitions are increasing day by day, the varieties of training also spring from time to time, to improve the performance.

Training is much like constructing a multi storied building for which one needs such as aerobic, anaerobic running, comprehensive conditioning, flexibility, etc. Several kinds of essentials like training intensities and modalities should be utilized in an ongoing process to achieve the goal of raising strong structures or competitively fit athletes. Depending on the progress in the construction plan, the relative mix of all these essentials will vary. As a training season develops, compressive conditioning work for strength of endurance will gradually form a transition into an emphasis on power with a substitution of intensity of volume in determining the total load.

Sport training is a systematic process extending over a long period. For the best results, the system of training has to be based and conducted on scientific facts and lines; where it is not possible to do that, the training has to be based on the results of successful practice which has withstood the test of time in sport.

Dance provides various benefits for the body and mind. It is a great way for dealing with stress. According to the American Dance Therapy Association (ADTA), dance or movement therapy involves numerous movements, which can improve the emotional, cognitive, physical and social integration of an individual. Dance therapy helps to boost self-expression in individuals with physiological disorders. Zumba is a dance therapy that involves the fusion of Latin rhythms and various easy-to-follow movements with different kind of styles, including salsa, merengue, mambo, rumba, cumbia, reggaeton, hip hop and flamenco. In the course of Zumba dance, interval-training sessions are carried out with a mixture of fast and low rhythms combined with resistance training.

Zumba & Aerobics exercises could help an individual to attain cardio-vascular respiratory fitness and coordination in the body. Zumba & Aerobics is a fairly new form of exercise and it is one of the best ways to improve the quality of life. The term Zumba & Aerobics is a totally dance exercises. Zumba & Aerobics is empowering cardio workout where you are totally unleashed. This fiercely energetic program is inspired by dance and drawn from a wide variety of disciplines such as step aerobics, floor aerobics Zumba dance and supported by music.

Zumba & Aerobics improves your level of physical fitness and helps your body work more efficiently. The cardio pulmonary system (the heart, blood vessels and lungs) is the primary system used by the body during any workout.

In this context, the investigator has made an attempt to find out the isolated and combined effect of Sumba Dance and Aerobic Training on Physical, Physiological, Hematological, Bio-chemical and Psychological variables of high altitude college women students.

For this study, sixty (N=60) women students studying Mahatha Gandhi University College of Teachers Education, Kumily, Kerala were selected as subjects. The subjects were divided at random into four groups of fifteen in each (n=15). Group-I underwent Sumba Dance, Group-II underwent Aerobic Training, Group-III underwent Combined Sumba Dance and Aerobic Training and Group –IV was as the Control group. The training period was limited to three days per week for twelve weeks. The dependent variables selected for this study were Speed, Strength, Respiratory Rate, VO_2max, Blood Sugar, Blood Urea, Total Cholesterol, High Density Lipoproteins Cholesterol, Stress and Anxiety. All the subjects were tested prior to and immediately after the experimental period on the selected dependent variables.

The data obtained from the experimental groups before and after the experimental period were statistically analyzed with dependent 't'-test and Analysis of covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, the Scheffe's Post hoc test was applied to determine the paired mean differences. The level of confidence was fixed at 0.05 level for all the variables.

5.2. Conclusions

From the analysis of the data, the following conclusions were drawn.

1) The Experimental groups namely, Sumba Dance group, Aerobic Training group, and Combined Sumba Dance and Aerobic Training group had significantly improved all the selected variables such as Speed, Strength, Respiratory Rate, VO_2max, Blood Sugar, Blood Urea, Total Cholesterol, High Density Lipoproteins Cholesterol, Stress and Anxiety.
2) Significant differences were also found among Sumba Dance group, Aerobic Training group, and Combined Sumba Dance and Aerobic Training group and

Control group in all the dependent variables such as Speed, Strength, Respiratory Rate, VO_2max, Blood Sugar, Blood Urea, Total Cholesterol , High Density Lipoproteins Cholesterol, Stress and Anxiety.

3) The Combined Sumba Dance and Aerobic Training group was found to be the best of the three training groups in improving Speed, Strength, Respiratory Rate, VO_2max, Blood Sugar, Blood Urea, Total Cholesterol , High Density Lipoproteins Cholesterol, Stress and Anxiety than the Sumba Dance and Aerobic Training group.

5.3. Recommendations

Based on the results of the study, the following recommendations were drawn.

Sumba Dance and Aerobic training have improved the selected Physical, Physiological, Hematological, Bio-chemical and Psychological variables of high altitude college women students. Hence, the three methods of training are recommended to the coaches, physical educators and fitness instructors who required developing the general health fitness as well as holistic well-being.

1) The Sumba dance programme recommended for those high altitude women students interested in developing the basic aerobic fitness qualities.
2) The Aerobic training programme recommended for high altitude women students who are aiming to develop their basic and specific endurance qualities.
3) The combined Sumba dance and aerobic training programmes are recommended for grassroots level sports practitioners, who need Physical, Physiological, Hematological, Bio-chemical and Psychological types of activities.

4) The increasing intensity and volume of the selected Sumba dance steps is favoured the elite level sports participants to enhance their high level of cardio vascular and cardio respiratory efficiency.

5) The results of the study are recommended to the Government of Kerala to incorporate these programmes in the curriculums by various Colleges and Universities.

6) The results of the present investigations are recommended to the Sports Authority of India to add these three training programmes, in their curriculums.