CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

SUMMARY

Health is an important part of one’s successful life or in other words, to lead a happy life, health has a great role and it includes physical, mental, social and emotional health of man. Among these, the physical health is important and depends upon the good functioning of different systems in the human body. Success in sports depends primarily on genetic endowment in athletes with morphological, psychological, physiological and metabolic traits specific to performance characteristics vital to their sport. Such genetically-endowed athletes must also receive optimal training to increase physical power, enhance mental strength and provide a mechanical advantage. When humans compete one another either in war or in sports the competitors, by definition, seek to achieve an advantage over opponent. Frequently, they use drugs and other performance enhancing substances to gain the upper hand. However, athletes often attempt to go beyond training and use substances and techniques. The functioning of different systems is related to the food that is consumed and in order to preserve the health from different diseases and to enhance or to promote the positive health, different systems of medicines are used and of these, the Ayurvedic system of medicine is a conventional form of medicine widely used in India. In Ayurveda, as well as the ancient
Egyptians, Roman and Chinese found the significance of many herbal-medicines for the betterment of physical performance. Herbal plants and spices are the important ingredients in Ayurvedic medicines and these plants and spices have magical powers not only to cure diseases but also to develop positive health so as to improve physical fitness. Among the Ayurvedic-Herbal medicines, Mimosa Pudicca and Laccifer Lacca are important medicines which helps to preserve positive health and from early times till today the above medicines has been used in various forms for healing diseases as well as for building strength and endurance.

The purpose of this study was to test the effect of consumption of “Lakshadi Choornam” (powder) with ingredients Lassifer Lacca and Mimosa Pudicca on performance of Cardio- Respiratory Endurance of the subjects. To achieve the purpose of the study, the research scholar has selected 45 college men students who were undergoing professional course in Physical Education as subjects. They have been selected randomly and assigned to three equal groups. Group one was control group, group two was placebo group and group three was the experimental group. The group two was given only normal wheat powder as a placebo and the control group do not consume anything. The experimental group consumed one gram of the prepared herbal medicines as daily dose three times a day for forty five days i.e. after breakfast, after lunch and after supper. There was no change in the daily routine of any of the subjects of the three selected groups during the period of experimentation. Pre-tests were conducted 24 hrs. before the beginning of the
experimentation and post-tests were conducted 24 hrs. after the completion of
the experiment for all the three groups. Apart from Cardio-Vascular
Endurance, selected biochemical variables namely Hemoglobin, Total
Cholesterol, Blood Sugar and selected physiological variables namely Resting
Pulse Rate, Vital Capacity, Respiratory Rate, Breath Holding Time, Systolic
Blood Pressure, Diastolic Blood Pressure were also tested.

The data collected from all the three groups were statistically examined
for significant difference if any, by applying the analysis of co-variance. After
eliminating the influence of pre-test means, the adjusted post test means of the
three groups were tested for significance and if there were any significant
difference, the Scheffe’s Post-hoc test were applied to find out the significant
difference between paired means.
CONCLUSIONS

From the results of the study the following conclusions were drawn.

1. The result of the study indicates that there was no significant difference on Hemoglobin among the control group and the other two experimental groups since, there was no effect on Hemoglobin of the subjects by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

2. There was no significant difference between the three groups on Total Cholesterol. This indicates that, *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca does not have any effect so as to reduce the Total Cholesterol.

3. No significant difference was noticed among the three groups on Blood Sugar. This indicates that, *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca does not have any effect neither to increase nor to decrease Blood Sugar.

4. The result of the study indicates that, there was no significant difference on Resting Pulse Rate among the control group and the other two experimental groups since, there was no effect on Resting Pulse Rate by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

5. The result of the study indicates that, there was no significant difference on Vital Capacity among the control group and the other
two experimental groups, as there was no effect on Vital Capacity by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

6. The result of the study indicates that, there was no significant difference on Systolic and Diastolic Blood Pressure among the control group and the other two experimental groups since, there was no effect on Blood Pressure by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

7. There was significant difference on Respiratory Rate between the control group and the supplementation group, as there was significant differences among the adjusted post–test means of the two groups on Respiratory Rate by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

8. The result of the study indicates that there was significant difference on Breath Holding Time between the control group and supplementation groups and the placebo group and the supplementation group, as there were significant differences among the adjusted post-test means of the different said group on Breath Holding Time by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

9. There was no significant difference on Cardio-Respiratory Endurance among the control group and the other two experimental
groups, as there was no effect on Cardio-Respiratory Endurance of the subjects by the consumption of *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca.

10. In Ayurveda, athletic performance is coming under *Balya* or *Bala* which means *Vyayam Sakthi*. The selected medicine *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca is a type of medicine which can be given to increase the *Vyayam Shakti* or athletic performance. It can be concluded that, even if the biochemical variables selected like Hemoglobin, Total Cholesterol and Blood Glucose do have a direct relationship with Endurance performance, they were not influenced by the supplementation. While, the physiological variables Resting Pulse Rate, Breath Holding time, Blood Pressure and Vital Capacity which do have direct relationship with Cardio-Respiratory Endurance performance have not shown any significant changes. On the other hand Breathe Holding Time and Respiratory Rate have shown some significant changes after the supplementation. Even though, some of the physiological variables have shown some significant change after supplementation, it may not be sufficient to produce a significant changes on the Cardio-Respiratory Endurance of the subjects after supplementation of the Ayurvedic-herbal medicines *Lakshadi Choornam*. 

"Summary"
RECOMMENDATIONS

On the basis of the results of the study and conclusions drawn the following recommendations are made.

1. It is recommended that the ‘Lakshadi Choornam’ with ingredients Lassiffer Lacca and Mymosa Pudicca can be given to sports persons who suffer from asthma or bronchial disorders.

2. *Lakshadi Choornam* with ingredients Lassiffer Lacca and Mymosa Pudicca can be given to sports persons who are suffering from breathlessness while doing physical activities.

3. It is recommended that, coaches and Physical Education teachers should employ the advantage of Ayurvedic- Herbal Medicine for the improvement of performance.

4. It is recommended that, further studies may be conducted by increasing the dosage of *Lakshadi Choornam* on the subjects.

5. It is recommended that, further studies may be conducted by increasing the duration of the treatment.

6. Further studies may be conducted by adding more herbal medicines with *Lakshadi Choornam*.

7. The same study may be conducted on long distance runners by increasing the dosage and duration of the treatment.
8. The same study can be conducted among female athletes on the selected variables.

9. Similar studies can be conducted to find out the effect of *Lakshadi Choornam* on other Physiological, Biochemical and Physical Fitness variables.