Chapter V

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The purpose of the study was to find out the effects of different depth of aqua training on selected physical and physiological variables among college men. To achieve the purpose of the present study forty male (N = 40) students studying in various classes from Lakshmibai National College of Physical Education, Kariavattom, during the year 2010-2011 were selected as subjects at randomly. They were divided into four groups and each group consisted of ten subjects. The three experimental groups were subjected to three different intensities of training programmes, in which, Group – I (n = 10) who underwent the aquatic training with water up to knee level, Group - II (n = 10) who underwent to aquatic training with water up to hip level, Group – III (n = 10) who underwent aquatic training with water up to shoulder level and Group - IV (n = 10) acted as control group who did not participate any special training apart from their regular curricular activities. All the subjects of the four groups were tested on selected criterion variables such as speed, agility, explosive power in terms of horizontal distances, flexibility, systolic and diastolic blood pressure, resting heart rate, cardio-respiratory endurance and vital capacity at prior to and immediately after the training programme. The physical variables such as speed, agility, explosive power and flexibility were assessed by administering 50 meters dash, shuttle run, standing broad jump and sit and reach test and the physiological variables such as blood pressure, resting heart rate, cardio-respiratory endurance and vital capacity were assessed by using sphygmomanometer, counting the pulse at resting condition, Cooper’s 12 minutes run/walk test and it was converted in VO$_2$ max and spirometer. Analysis of covariance was used to determine
the differences, if any, among the adjusted post test means on selected criterion variables separately. Whenever the ‘F’ ratio for adjusted post test mean was found to be significant, the Scheffe’S test was applied as post-hoc test to determine the paired mean differences. The level of significance was fixed at .05 level of confidence.

5.2 CONCLUSIONS

From the results of the study, the following conclusions were drawn:

1. It was concluded from the result of the study that there was a significant improvement in speed after the different depth of aqua training programmes when compared with the control group. In which, experimental group – I (aqua training with water up to knee level) were better improvement when compared with the control group. Group - II (aqua training with water up to hip level) and Group - III (aqua training with water up to shoulder level) also improved the speed when compared with the control group. The result of the study also had shown that there was no significant difference existed between the training groups after their respective training programmes on speed.

2. It was also concluded from the results of the present study that the agility was improved after the different intensities of aqua training. The experimental group –I (aqua training with water up to knee level) were better improvement when compared with the control group. Group - II (aqua training with water up to hip level) and Group - III (aqua training with water up to shoulder level) also improved the agility when compared with the control group. The result of the study also shown that there was no significant difference on agility that exists between the training groups after their respective training programmes.
3. The result of the study also shown that there was a significant improvement in explosive power after the different intensities of aquatic training programme, i.e. group – I (aquatic training with water up to knee level), group - II (aquatic training with water up to hip level) and group - III (aquatic training with water up to shoulder level). But the result of the study has shown that there was no significant difference was found between the different intensities of aquatic training groups on explosive power.

4. It was concluded from the result of the study that improvement in flexibility was positive after the different intensities of aquatic training. But the result of the study has shown that there was no significant difference was found between the different intensities of aquatic training groups on flexibility.

5. The result of the present study has shown that reduction in the systolic blood pressure and diastolic blood pressure was significant after the different depths of aquatic training programme. But the result of the study has shown that there was no significant difference was found between the different intensities of aquatic training groups on systolic and diastolic blood pressure.

6. It was concluded that the resting heart rate was significantly reduced after the different intensities of aquatic training programme. The result of the study also shown that there was no significant difference was found between the training groups on heart rate.

7. It was also concluded that the cardio-respiratory endurance was significantly improved after the different intensities of aquatic training groups. But the result of the study has shown that there was no significant difference was found between the different intensities of aquatic training groups on systolic and diastolic blood pressure.
8. It was also found that there was a significant improvement in vital capacity for all the training groups, i.e. group – I (aquatic training with water up to knee level), group - II (aquatic training with water up to hip level) and group - III (aquatic training with water up to shoulder level). There was no significant difference was exists between the training groups.

5.3 RECOMMENDATIONS

Based on the results of the study, the following recommendations were suggested:

1. This study may help the college level players to improve their speed, agility, explosive power and flexibility.
2. The different water level intensities of aquatic training may improve resting heart rate, blood pressure, cardio respiratory endurance and vital capacity.
3. This study may help to improve physical and physiological qualities of National and International players.
4. This study may help the researcher to formulate the intensity and load for the water level training.
5. Further studies may be conducted to explore the effect of different depths of aquatic training on health related physical fitness, after considering the diet as one of the control variable.
6. Modern industrialization has resulted in a more inflating metabolic disorder like obesity. Hence, the effect of training can be assessed among obese people and overweight people.
7. Similar study may be conducted for athletes especially injured athletes.
8. The effect of aqua training can be assessed on body composition and biochemical variables.
9. Similar study may also be conducted on various rehabilitation programmes.