

### **5.1 Summary**

The purpose of the current investigation, in brief, was to determine an effect of continuous and alternate pace endurance training on selected physical and physiological variables of long-distance runners. To achieve this purpose, ninety (n=90) male long-distance runners from the Surat district who have competed at least once in distance running competitions longer than 3000 meters were selected at random and they were in 17 to 22 years of age. The selected subjects were divided randomly into three equal groups of thirty (n=30), including experimental and control groups. Group - I (n = 30) participated in slow continuous training, Group - II (n = 30) participated in alternate pace endurance training, and Group - III (n = 30) served as the control group.

The variables were selected as criterion variables from the Physical and Physiological variables name as; speed endurance, cardio respiratory endurance, endurance, abdominal strength endurance, leg strength, heart rate, vital capacity and blood pressure. The two experimental groups were participating in the training given 3 days a week for 8 weeks. The regular curriculum was offered to the control group. All groups were retested on all selected variables after the conclusion of the eight-week training programme, and the results were kept as a post-test score. The collected data was then analysed using the appropriate statistical techniques.

In order to find out the effect of slow continuous and alternate pace endurance training on selected physical and physiological variables of long-distance runners. The univariate analysis of covariance (ANCOVA) and the post hoc pair wise comparison using the LSD test analysis. For testing the hypothesis, the level of confidence was set at 0.05 levels.

### **5.2. Conclusions**

The following conclusions were drawn based on the results provided and the discussions conducted, under the limitation and delimitations of this study.

1. The Experimental groups namely, slow continuous training group and alternate pace endurance training group had significantly improved in speed endurance, cardio

respiratory endurance, endurance, muscular endurance, leg strength, heart rate, vital capacity and systolic and diastolic blood pressure.

2. Significant differences in achievements were found between slow continuous training and alternate pace endurance training in all the selected criterion variables such as speed endurance, cardio respiratory endurance, endurance, muscular endurance, leg strength, heart rate, vital capacity and systolic and diastolic blood pressure.
3. The alternating pace endurance training had a significantly stronger impact on the group concerned than the slow continuous training in enhancing the performance of speed endurance, endurance, cardio respiratory endurance, muscular endurance, leg strength and vital capacity.
4. The slow continuous training group's considerable improvement in systolic and diastolic blood pressure than the alternating pace endurance training.
5. The experimental groups' namely slow continuous training group and alternate pace endurance training group showed equal improvement while improving the performance of heart rate.
6. The control group did not show any significant improvement on any of the selected physical and physiological variables among long distance runners.

### **5.3. Recommendations**

The results of this study show that participants selected physical and physiological variables were considerably changed by eight weeks of slow continuous training and alternative pace endurance training programmes. The following recommendations are given in light of the research's findings, discussions, and results.

1. According to the findings of the current study, slow continuous training and alternative pace endurance training increased the physical and physiological responses of long-distance runners. It is recommended that coaches, trainers, and physical educators use these data to help their players' chosen physical and physiological characteristics.
2. According to the study's findings, slow continuous training and alternate pace endurance training can be employed by exports to enhance their players' overall physical fitness and performance in a variety of games.

3. The study's findings demonstrated that alternative pace endurance training and slow continuous training were more successful at enhancing performance. As a result, it can be used for a variety of sports and games for both men and women.

#### **5.4 Suggestions for Further Research**

1. There are more opportunities to carry out research of this nature on different sporting events, including middle and short distance races.
2. Other bio-chemical, physiological and physical fitness factors may be included to a study using a similar research design.
3. The sample size may be increased, allowing the researchers to obtain more exact results from their research.
4. The subjects of a similar study could be athletes or players competing at the state or national levels.
5. On female participants, a similar study might be carried out.
6. Similar studies could be conducted over longer time periods or with training intensities other than those described in the current study.
7. For students in colleges and higher secondary schools, a similar study may also be conducted.