Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The present chapter is organized in three main sections. The first section presents the summary and conclusions, the second section suggests implications for educators, and the third section proposes implications for future research.

Summary

To achieve the purpose of the study, forty five male (n=45) students studied in Department of Physical Education, Health Education and Sports, The M.D.T. Hindu College, Tirunelveli, Tamilnadu, were randomly selected as subjects. The age of the subjects ranged from 18 to 21 years. The subjects were divided into three groups, fartlek training group, interval running group, and a control group with no prior structured experience in fartlek training and interval running. The duration of training period was restricted to 12 weeks and the number of sessions per week was confined into three. The criterion variables selected for the study were cardio respiratory endurance, speed endurance, muscular endurance, VO$_2$ max, breath holding time and resting pulse rate.

The selected criterion variables for the study were assessed by the following standardized tests: cardio respiratory endurance assessed by 12 min run/walk test, speed endurance assessed by 150
meters endurance test, muscular endurance assessed by wall sit test, 
VO₂ max was assessed by queens’ college step test, breath holding 
time assessed by nostril holding method test, and resting pulse rate 
assessed by radial pulse count (Per Minute) test. Since the manual 
operation was made during 12 min run/walk test, 150 meters 
endurance test, wall sit test, queens’ college step test, nostril holding 
method, and radial pulse count. The data were collected on selected 
criterion variables, two days prior to and immediately after the 
training period.

The pre test and post test randomized control group design was 
used as experimental design in which forty five men subjects were 
divided into three groups of fifteen each at random. No attempt was 
made to divide the groups in any manner. The collected data from the 
three groups prior to and immediately after the training programme 
on selected criterion variables were statistically analyzed with 
dependent ‘t’ test to find out the significant improvement between pre 
and post- test means of both groups and analysis of covariance 
(ANCOVA) was used to find out the significant difference between 
experimental and control groups. Whenever the ‘F’ ratio for adjusted 
test was found to be significant, the scheffe’s test was applied as post- 
hoc test to find out paired mean difference. In all the cases 0.05 level 
of significant was fixed to test the hypothesis.
Conclusions

The following conclusions were derived from the findings of the above study,

1. The fartlek training group had significantly improved the participants’ cardio respiratory endurance, speed endurance, muscular endurance, VO₂ max, breath holding time and resting pulse rate.

2. The interval running group had significantly improved the participants’ cardio respiratory endurance, speed endurance, muscular endurance, VO₂ max, breath holding time and resting pulse rate.

3. The fartlek training and interval running groups had significant difference towards improving the participants’ cardio respiratory endurance, speed endurance, muscular endurance, VO₂ max, and breath holding time.

4. Interval running group outperformed the fartlek training group on cardio respiratory endurance, speed endurance, muscular endurance, VO₂ max, and breath holding time.

5. Fartlek training group and interval running group excelled on cardio respiratory endurance, speed endurance, muscular endurance, VO₂ max, breath holding time and resting pulse rate while comparing the control group.
6. Fartlek training group and interval running group were shown equal improvement in terms of resting pulse rate but performed exceptionally well than the control group.

**Implications for Educators**

From the discussion of the findings, it was evident of this study that interval running was effective in supporting participants’ performance. A close examination of the results revealed that interval running alone was insufficient as a form of training for dependent variables. Also it was inferred that the fartlek training were particularly effective in supporting dependent variables. Therefore, interval running can be integrated with fartlek training to develop dependent variables which will improve the overall ability of the participants. The interval running combined with fartlek training should be included in physical training programmes.

In this study, the findings showed that the fartlek training and interval running were particularly effective in supporting dependent variables. Therefore, Physical Educators, trainers and coaches should give more attention to fartlek training and interval running.

**Implications for Future Research**

Based on the results of this investigation and the related literatures the following recommendations are made for future research.
1. It is recommended that further research can be designed to investigate the effects of training programmes based on gender.

2. It is recommended that further research can be designed to investigate the effects of training in an elite subject population.

3. It is recommended that further research can be designed to investigate the effects of training on both trained and untrained subjects.

4. It is recommended that further research can be conducted using more strenuous training programs.

5. It is recommended that future study may be conducted on skeletal muscle morphology, skeletal muscle capillarization, muscle metabolic enzymes, hormone concentrations, as well as all the dependent variables measured in this investigation.