Chapter - V

Summary, Conclusions and Recommendations
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SUMMARY

The purpose of the study was to find out the effects of maximal power and plyometric trainings on selected strength and power parameters such as leg strength, back strength, strength endurance, elastic power, explosive power in terms of vertical distance and explosive power in terms of horizontal distance, their states after four cessations of training (detraining programme) and after four weeks of retraining programme at different stages. For the purpose of the study, forty five sports hostel boys in Tiruchirapalli, Tamil Nadu, India, during the academic year 2006-2007 were randomly selected as subjects by lot method from a total of 103 students. The age, height and weight of the selected subjects were ranged from 15 to 17 years, 159 to 163 cm and 50 to 60 kilogram respectively. The selected subjects were divided into three equal groups of fifteen subjects each at random. Group I underwent maximal power training, Group II underwent plyometric training and Group III acted as control. The maximal training group (Group I) and plyometric training group (Group II) underwent their respective training programmes for three days per week for twelve weeks. Group III acted as control which did not undergo any special training programme apart
from their regular physical education programme of the curriculum. All the subjects of the four groups were tested on selected criterion variables such as leg strength, back strength, strength endurance, elastic power, explosive power in terms of vertical distance and explosive power in terms of horizontal distance at prior and immediately after the training programme as pre and post tests respectively, at every ten days of detraining programme for forty days (four cessations) and after the four weeks of retraining programme.

The collected data were statistically analysed by using 3 x 7 factorial ANOVA with last factor repeated measures to find out the significant differences between rows (groups) and columns (tests). According to Jerry R. Thomas and Jack K. Nelson, whenever the main purpose is usually lies in the interaction, it is sufficient to discuss the interaction effect only, unless some special circumstances exists, interest in testing the main effects is usually limited. Hence, whenever, the obtained “F” ratio for interaction effect was found to be significant, the simple effect test was used as a follow up test. Since, four groups and seven different stages of tests were compared, whenever the obtained “F” ratio value in the simple effect was significant the Scheffe’S test was applied as post hoc test to determine the paired mean differences, if any.
CONCLUSIONS

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

1. All the experimental groups namely maximal power training, plyometric training groups improved selected dependent variables namely leg strength, back strength, strength endurance, elastic power, explosive power in terms of vertical distance and explosive powers in terms of horizontal distance after twelve weeks of training period when compared to control group.

2. Significant differences were noticed among the experimental groups in improving the selected strength and power parameters, after twelve weeks of training period.

3. It is also concluded that maximal power training group was better than the plyometric training group towards improving the selected strength parameters. And plyometric training group was better than maximal power training group towards improving the selected power parameters.

4. There was no significant reduction in the performance of selected strength and power parameters during the first and second cessation of detraining period.
5. Significant reduction in the performance of selected strength and power parameters were found during the third and fourth cessation of detraining period.

6. The maximal power training group and plyometric training group improved selected strength parameters after four weeks of retraining period.

7. The maximal power training group and plyometric training group improved selected power parameters after four weeks of retraining period.

RECOMMENDATIONS

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

1) In the present study, it was concluded that maximal power training had much influence on all the strength parameters. Hence, it is recommended to the coaches, trainers and physical educators to adopt this training to improve strength parameters.

2) It was also concluded that plyometric training had much influence on all the power parameters. Hence, it is recommended to the coaches, trainers and physical educators to adopt this training to improve power parameters.
3) The duration of the training period and retraining period may be increased up to 15 – 18 weeks and 6 weeks respectively to examine the training and retraining effect.

3) The similar study may be carried out by selecting national, or state level players as subjects.

4) The similar study may be attempted by using physiological and biochemical variables as criterion variables.

5) The similar study may be conducted by selecting women students as subjects.