Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of the study was to determine as to whether selected mental rehearsal and mental depiction programme has any significant effect on performance tasks involving accuracy, balance, coordination and speed in relation to different age levels.

The subordinate purposes of the study were (a) to see and compare the effect of mental rehearsal and mental depiction on different types of performance tasks i.e., accuracy, balance, coordination and speed, (b) to compare the effect of mental rehearsal and mental depiction on accuracy, balance, coordination and speed at two different age levels (13-15 and 16-18 years, c) to delve deep into the relationship between mental depiction and final score and d) to find out whether there was an influence on imagery ability due to mental rehearsal programme.

The subjects of this study were 160 male students of Sainik School, Kazhakuttam, Trivandrum, Kerala, in the age group of 13-15 and 16-18 years, each group having 80 students who were selected at random.
The following variables were adopted for the mental rehearsal and mental depiction programme and tests were applied on the subjects:

For accuracy task AAHPER's softball throw was taken. Modified Bass Dynamic Test was taken for balance task.

Figure of 8 Duck Test was employed for coordination factor.

Six second dash was taken for speed.

For the mental rehearsal and mental depiction the technique used by the investigator was instruction by verbalization method with a background music (which was recorded and played when instructions were given.

To compare the effect of mental rehearsal and mental depiction with performance task involving accuracy, balance, coordination and speed at different age levels, pre-training and post-training imagery questionnaire in different variables at different age levels analysis of variance was made as an overall test of significance of the difference between means. Whenever the analysis of variance resulted in a significant 'F' ratio, post-hoc test for comparison was applied to find out which of the differences of paired means was significant.
The analysis of variance was tested for significance at .05 level of confidence.

To compare the effect of mental rehearsal training between both the age groups in each variable, the difference of scores from initial to final score in each variable was taken for both age groups separately and 't' test was used to compare the difference in means.

Analysis of data revealed that there were significant differences at .05 level between the pre-test, depiction and post-test score of accuracy, balance, coordination and speed for both the age groups (13-15 and 16-18 years). As the 'F' ratio was found significant post-hoc test for all the variables were carried out for both the age groups separately. In all the variables in both the age groups the depiction and post-test scores showed significant differences from the pre-test scores as obtained mean differences were much higher than the critical differences.

In the variable balance, the depiction and post-test scores showed significant mean differences as the obtained mean difference was higher than the critical difference, whereas here it is regarded better provided it is insignificant.

In case of variable speed, the age group of 16-18 years showed significant mean differences between 'depiction and post-test score as the obtained mean difference was higher
than the critical difference whereas if it was insignificant then it would have been regarded better.

Apart from the above mentioned variables between depiction and post-test scores in different age groups, the remaining variables in both the age groups (accuracy, coordination and speed for 13-15 years, accuracy and coordination for 16-18 years) showed insignificant differences between depiction and post test scores as the obtained mean difference was lower than the critical difference.

Further, analysis of variance was tested for significance at .05 level of confidence for pre-training and post-training imagery score for all the variables (accuracy, balance, coordination and speed) in both the age groups (13-15 and 16-18 years) and analysis of data revealed that the 'F' ratio were found to be significant for all the variables in both the age groups.

Finally, between the age groups of 13-15 years and 16-18 years, separately in all the variables 't' test was conducted. Analysis of this test revealed that there were significant differences between the age groups in accuracy, balance and speed as the obtained 't' value was much higher than the tabulated 't' of 1.98.
The mean score of each variable was taken into consideration for comparison where it was found that in accuracy task the younger boys had improved better in comparison to the older boys. But in coordination and speed it was the 16-18 years boys who showed higher score.

Whereas in case of balance task the obtained 't' value was much lower than the tabulated 't' value thus reflecting that in this task both the age groups had no difference in learning through mental rehearsal and mental depiction.

**Conclusions**

Within the limitations of the present study and on the basis of the results of the study, the following conclusions were considered appropriate:

1. There was a significant positive effect of mental rehearsal and mental depiction for experimental group on performance task of accuracy, balance, coordination and speed for age group of 13-15 and 16-18 years in comparison with control group.

2. There was a significant relationship between depiction and final score due to mental rehearsal programme on performance task of coordination and speed for both the age groups and accuracy for age group of 13-15 years.
3. No significant relationship was found between depiction and post-test score due to mental rehearsal programme on the performance of balance task for both the age groups except on speed for the age group of 16-18 years.

4. There was significant effect of mental rehearsal on imagery ability and it is confirmed that mental rehearsal and imagery are interdependent and are effective for the improvement of performance.

5. There was significant effect of mental rehearsal programme between both the age groups in accuracy, coordination and speed task. The age group of 16-18 years performed better in coordination and speed task in comparison to the age group of 13-15 years whereas in accuracy task the age group of 13-15 years performed better.

6. There was no significant effect of mental rehearsal programme between both the age groups on the performance of balance task.

7. Overall the experimental group proved much better in comparison to control group in all the variables, thus establishing the fact that mental rehearsal and mental depiction have significant effect upon the performance task of accuracy, balance, coordination and speed.
8. This also has removed the misunderstanding and misgivings about the 'body-mind relationship' and no doubt has proved the integration of this phenomenon while performing skills of games and sports.

**Recommendations**

On the basis of experience of the present research worker and the findings of this study here are some recommendations for the physical educationists, coaches, the policy makers and the athletes:

1. A similar study may be conducted in relation to learning and adaptability of specific games and sports.

2. There need to be more vigorous experimentation at higher level of participation both for male and female athletes.

3. At lower level i.e. in schools the study may be conducted by the physical education teachers or coaches in relation to their games and sports for a better acquisition and retention of skills.

4. A similar study may be conducted in relation to physical practice.

5. Also a similar study may be conducted for other psychological factors such as to reduce anxiety, tension, improving
competitive spirit, arousing interest and the like.

6. Efforts should be made to develop different types of mental training programme either through audio-cassettes or video cassettes.