Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to investigate the interrelationships among physical fitness, motor ability, health status and academic achievement of higher secondary boys belonging to different socio-economic groups.

The subjects were five hundred and ten male students of classes nine, ten and eleven studying in five different higher secondary schools of Greater Gwalior.

The students were divided into four socio-economic groups i.e., upper strata, upper middle strata, lower middle strata and upper lower strata by administering the Socio-economic Status Scale Questionnaire prepared by Kapoor and Kochar.

Health status was limited to nutritional status which was obtained by applying Pelidisi's formula which makes use of sitting height and weight. Physical fitness was measured by administering AAHPERD Youth Fitness Test which included pull-up, sit-up, shuttle run, standing long jump, 50-yard dash and 600-yard run. Motor ability
of the subjects was determined by administering Barrow Motor Ability Test which comprises standing broad jump, zig zag run and 6 pound medicine ball put. AAHPERD Youth Fitness Test and Barrow Motor Ability Test were administered outdoors. Academic achievement of the subjects in terms of percentage of marks obtained by them in their annual examination of 1986-87 was collected from the office of each school. Tester competency, subject reliability and reliability of tests were established by test retest method and the reliability co-efficients were found to be satisfactorily high.

The data were analyzed using Product Moment (r) method of computing correlation. Level of significance for testing the hypotheses was set at .05.

Analysis of data revealed statistically significant relationship between physical fitness and motor ability among subjects belonging to upper strata (r = 0.732), upper middle strata (r = 0.707) and lower middle strata (r = 0.765). The relationship between physical fitness and motor ability was not found to be significant among subjects belonging to upper lower strata (r = 0.233)

It was revealed that there was no relationship between physical fitness and health status among subjects
belonging to upper strata \( (r = 0.052) \), upper middle strata \( (r = 0.042) \), lower middle strata \( (r = 0.093) \) and upper lower strata \( (r = 0.059) \).

There was also no relationship between motor ability and health status among subjects belonging to upper strata \( (r = 0.169) \), upper middle strata \( (r = 0.055) \), lower middle strata \( (r = -0.117) \) and upper lower strata \( (r = -0.019) \).

It was also revealed that the relationships between health status and academic achievement among subjects of upper strata \( (r = 0.107) \), upper middle strata \( (r = 0.012) \), lower middle strata \( (r = 0.071) \) and upper lower strata \( (r = -0.033) \) were not statistically significant.

The relationship between physical fitness and academic achievement among subjects of upper strata \( (r = -0.131) \), upper middle strata \( (r = -0.112) \) and upper lower strata \( (r = -0.072) \) were also not found to be significant as evident from the analysis of data.

It was also found that there was no significant relationship between motor ability and academic achievement among subjects of upper strata \( (r = 0.004) \), upper middle strata \( (r = -0.106) \) and upper lower strata \( (r = 0.127) \).
A significant relationship was found to exist between physical fitness and academic achievement \((r = 0.158)\) and motor ability and academic achievement \((r = 0.162)\) among lower middle strata subjects.

**Conclusions**

Within the limitations of the study and on the basis of the findings of the study, the following conclusions may be drawn:

1. Physical fitness and motor ability are found to be significantly related to each other in all the socio-economic groups employed in the study except in the case of upper lower strata where the relationship between the two was not found to be significant.

2. In none of the socio-economic groups employed in the investigation, physical fitness and health status were found to be significantly related to each other.

3. The upper strata, upper middle strata and upper lower strata did not indicate a significant value of correlation between physical fitness and academic achievement whereas in the case of lower middle strata the relationship between the two was found to be statistically significant.
4. The relationship between motor ability and health status was found to be insignificant in all the four socio-economic groups employed in the investigation.

5. The relationship between motor ability and academic achievement was found to be statistically significant with regard to lower middle strata whereas in the remaining three socio-economic groups, namely, upper strata, upper middle strata and upper lower strata these two variables were not found to be related to each other.

6. None of the socio-economic status groups employed in the study showed a statistically significant relationship between health status and academic achievement.

Recommendations

In the light of the conclusions drawn the following recommendations can be made:

1. The results of the present investigation may help the teachers of physical education and coaches of different games and sports in predicting performance of their subjects especially in those variables where significant relationships have been found to occur. In case
the value in one of the variables in known, the performance in the other can be predicted.

2. Based on the findings of the present study it may be recommended that subjects belonging to lower middle strata may be considered as potential sportsmen in various sporting activities and, thus, may be provided greater opportunities and exposure to learn the skills of games and sports.

3. The present study may be repeated with subjects of age and sex other than those employed in this investigation.

4. Similar studies may be undertaken by adopting other techniques such as Clinical method, Pathological method, Survey method, Observation method or combination of these methods for judging the health status of the subjects.

5. The present study may be repeated by selecting subjects from schools working under a common management like Central School Organization, Public Schools, Navodaya Schools and the like, in order to avoid the influence of difference in the course content which, in turn, might
influence assessment of academic achievement.

6. The study may be replicated with subjects of different performance standard, namely, Inter-school level, Inter-collegiate level, Inter-varsity level, Inter-state level etc.